

Exhibit 1

**UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA**

**IN RE: CENTURYLINK SALES
PRACTICES AND SECURITIES
LITIGATION**

MDL No. 17-2795 (MJD/KMM)

This Document Relates to :

Civil Action No. 18-296 (MJD/KMM)

**EXPERT REPORT OF BRUCE DEAL
MARCH 23, 2020**

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I. INTRODUCTION

1. I have been engaged by counsel for CenturyLink, Inc. (“CenturyLink” or the “Company”), a large, publicly-traded telecommunications company, to provide expert testimony in the matter *In re: CenturyLink Sales Practices and Securities Litigation* (the “Action”).¹ In this Action, Plaintiffs allege that CenturyLink engaged in an illegal sales practice known as “cramming,” which allegedly had a “material financial impact on the reported financial results” and consequently inflated CenturyLink’s share price between March 1, 2013 and July 12, 2017 (the “Class Period”).² Plaintiffs allege that drops in CenturyLink’s stock price on June 16, June 19, and July 12, 2017 were the result of corrective disclosures of the disputed sales practices, which were allegedly concealed from shareholders during the Class Period.³

2. I have been asked to address certain economic and financial issues in connection with this Action. I address these topics and provide supporting analysis in the body of this Report. However, before addressing these issues, it is useful to provide an overview of the relevant economic framework in this type of litigation.

A. Legal and Economic Framework

3. This Action is brought under Section 10(b) of the Securities Exchange Act of 1934 and United States Securities and Exchange Commission (“SEC”) Rule 10b-5 promulgated thereunder.⁴ Throughout the Report, I will refer to this and similar litigation as “10b-5

¹ Consolidated Securities Class Action Complaint, *In re: CenturyLink Sales Practices and Securities Litigation*, United State District Court, District of Minnesota, Civil Action No. 18-296 (MJD/KMM), June 25, 2018 (“Complaint”).

² Complaint, ¶¶ 1–15.

³ Complaint, ¶¶ 16–21.

⁴ Complaint, ¶ 22.

litigation.” Based on my understanding from counsel of the legal framework, at a very basic level, the premise of 10b-5 litigation is that the defendants intentionally or with severe recklessness temporarily inflated the value of a security through misrepresentations or omissions, before the stock price subsequently dropped to its “true” level when the actual facts were disclosed. Economic harm results from the difference in per-share inflation for purchasers of the security.

4. As a simplified example, a company might inflate the price of its stock in order to appear to potential customers to be more successful and valuable. To achieve this inflation, the company might falsely announce that it just landed a big contract while announcing no other news. That announcement might cause the stock price to increase. At some later point, the “truth” that the company did not actually land the contract would be revealed and the stock price would decline (*i.e.*, a “corrective disclosure”). The period of the artificial inflation in 10b-5 litigation is known as the “class period.”

5. During the period between the false inflation and the corrective disclosure, shareholders who bought the stock and held through the corrective disclosure may have realized a loss caused by the false information, when they buy at a price that includes inflation and later sell or hold until the inflation decreases or is eliminated. The amount of inflation present in the stock price, if any, during the class period is often referred to as the “inflation ribbon.” This is a reference to the idea that there would have been a “true” price for the security during the class period, but at every moment in time there was an additional level of inflation (the “ribbon”) that caused the actual trading price to be higher than the uninflated price. As information available to investors changes over the class period, the amount of inflation can also change; that is, the inflation ribbon can be of varying width during the class period, depending on the nature and

timing of the alleged inflationary and corrective disclosure(s). This is sometimes referred to as “scaling” the amount of inflation, as the amounts may change due to alleged inflationary or corrective disclosures, or changes in the practices of the company over time. In addition, where there are allegations of multiple false or misleading statements, the inflation ribbon may need to be calculated as a series of ribbons, such that if only a subset of the allegations are found to be true, the inflation ribbon(s) must be able to account for various combinations of findings. This is sometimes referred to as “parsing” the inflation.

6. I also understand from counsel, at a very basic level, that with respect to the predominance requirement for class certification: (1) a presumption of reliance based on the “fraud-on-the-market” theory is rebuttable with evidence that the alleged misrepresentations did not artificially inflate the stock price; and (2) Plaintiffs’ damages model must be consistent with its liability case. With respect to a presumption of reliance based on the “fraud on the market” theory, I also understand from counsel that Plaintiffs must establish a connection between the alleged misrepresentations and artificial stock price inflation by showing some combination of “front-end” inflationary statements and “back-end” curative disclosures. With respect to articulating a damages model sufficient to establish predominance, I further understand from counsel that it is Plaintiffs’ burden to show that their model is capable of measuring only those damages arising from Plaintiffs’ theory of liability given the particular facts and circumstance of the specific case at hand. In other words, simply stating that an inflation ribbon will be calculated is not sufficient. In particular, where scaling and parsing are important and where the fact pattern and allegations are complex, it is necessary to provide an articulation of how a common damages model will be developed that will incorporate the complexities of the case.

7. As explained further in the subsections immediately below—and elaborated upon throughout the remainder of my Report—the particulars of Plaintiffs’ liability theory, coupled with the specific economic facts and circumstances evident over the proposed Class Period (including on the dates of supposed inflationary misrepresentations and alleged curative disclosures) lead me to the conclusion that, from an economic perspective, Plaintiffs have demonstrated neither that the alleged misrepresentations artificially inflated the price of CenturyLink’s securities, nor that the alleged corrective disclosures were actual disclosures as opposed to reflections of uncertainty around allegations, nor that they have a model capable of reliably measuring any common inflation, in the event that any of the various allegations are found to be true.

1. Economic Framework for This Matter

8. This Action alleges securities fraud by CenturyLink and certain of its current and former officers related to its stock (traded on the NYSE as “CTL”) and a specific debt offering (the “7.60% Notes”).⁵ The broad allegations in this Action, which I discuss in more detail in this Report, are as follows:

- **Inflation:** Rather than a specific instance of inflation (as in my earlier hypothetical single announcement of a new contract), Plaintiffs allege in their Complaint that CenturyLink made a litany of misrepresentations on 55 different dates often corresponding to its quarterly earnings announcements, quarterly and annual SEC filings, and presentations at investment conferences over the multiyear Class Period.⁶ They claim five specific categories of alleged misrepresentations related to the Company’s (1) “customer first” business strategy, (2) financial performance drivers, (3) reasons for its “fluctuating financial results,” (4) business practices related to sales and billing, and (5) “material omissions under Item 303.”⁷ They further allege that the company implemented an experimental “low cramming” period that significantly

⁵ Complaint, ¶ 27.

⁶ Complaint, ¶¶ 190–263.

⁷ Complaint, ¶ 190.

impacted revenues.⁸ Plaintiffs also analogize their *allegations* of cramming-related misconduct to *findings* during the Class Period that a much larger financial institution, Wells Fargo, did in fact engage in fraudulent billing.⁹

- **Corrective Disclosures:** Rather than a specific disclosure by the company of a past error, fraud, or wrongdoing (as in my hypothetical corrective Company announcement of the new contract not really being landed), there are three alleged corrective disclosure dates in this Action. Each of these is an announcement of a new lawsuit or an investigation spurred by allegations of sales and billing practices that had been leveled at the industry for decades prior to the Class Period, as well as during the Class Period. Importantly, they are *not* announcements concerning the accuracy of the alleged misstatements in the Complaint, nor are they announcements of resolution of the lawsuits or investigations with large fines, major regulatory actions, restatement of financial results, or other findings of any truth to Plaintiffs' allegations of systematic fraud of the sort that would expect to materially change the price of CenturyLink stock.

9. Plaintiffs identify allegedly inflationary disclosures on 55 different calendar days, which could potentially have impacted CenturyLink's securities prices on 52 different market days,¹⁰ spread across each quarter over a 4+ year Class Period. On these 52 market days, a large amount of Company-specific information other than the various categories of alleged misstatements was often also disclosed, such as quarterly earnings announcements of financial results. Furthermore, over the entire Class Period, CenturyLink, similarly situated local exchange carriers, and the telecommunications industry as a whole were undergoing massive change due to

⁸ Complaint, ¶¶ 109–120.

⁹ See, for example, Complaint, ¶ 16. "The truth concerning the Company's fraudulent practices began to be revealed on June 16, 2017, when Bloomberg published a story revealing that a CenturyLink whistleblower, Heiser, was fired after raising her concerns about the Company's fraudulent business practices with Defendant Post. That article, titled 'CenturyLink Is Accused of Running a Wells Fargo-Like Scheme,' addressed Heiser's account of CenturyLink's practice of charging customers for services they did not request, the striking parallels to the Wells Fargo scandal, ..."

¹⁰ Some of the allegedly inflationary disclosures were made after 4 PM ET, which is the close of trading for CenturyLink's stock. Therefore, their potential impact on CenturyLink securities prices would be felt on the following trading day. If a separate misstatement was alleged on that following trading day (before 4:00 PM), any potential price impact(s) for the two consecutive-day disclosures would be felt on the same trading day. As such, I find that the allegedly inflationary disclosures could potentially have affected CenturyLink's stock price on 52 distinct trading or "market" days (hereafter referred to as "alleged inflationary days," "52 alleged inflationary dates," or something similar).

increasing demand for sources of supply of bandwidth for audio, video, and data transmission and decreases in demand for certain legacy services, such as fixed telephone lines.

10. As explained in detail later in my Report, my analysis of the 52 allegedly inflationary disclosure dates shows that CenturyLink's stock price had positive abnormal returns on only four of those dates, negative abnormal returns on eight of those dates, and no abnormal returns on the remaining 40 of those dates. Analyst commentary in response to Company disclosures on those dates also gives no systematic indication that professional market observers attributed any particular stock price movement as a response to any of the five categories of alleged inflationary misrepresentations. These economic facts and circumstances make it very difficult, if not impossible, to identify exactly what information was (or wasn't) moving CenturyLink's stock price, let alone by how much, on those 52 days. Plaintiffs have not identified a model that would allow any accurate calculation of inflation from these alleged inflationary disclosures, and have certainly not articulated how a common model would allow for parsing and scaling of alleged inflation such that a common method could be used to calculate damages.

2. *Dr. Hartzmark's Report and Opinions*

11. I understand that this Action is currently in the class certification stage of the litigation. As part of that process, Plaintiffs have retained Dr. Michael Hartzmark as an economic expert. His report, dated January 21, 2020¹¹ covered several topics:

- **CTL Equity Market Efficiency:** Dr. Hartzmark devotes 35 pages of his report to discussion and analysis of the efficiency of the market for CenturyLink's equity.¹²

¹¹ Expert Report of Michael L. Hartzmark, Ph.D., January 21, 2020 ("Hartzmark Report").

¹² Hartzmark Report, pp. 6–42.

- **CTL Equity Event Study Related to Three Alleged Corrective Disclosure Dates:** On the final three pages of his discussion of CTL market efficiency, he presents the results of his event studies for each of the three alleged disclosure days, *i.e.*, that there were statistically significant negative abnormal returns on two of those three days.¹³
- **7.60% Notes Bond Market Efficiency:** Dr. Hartzmark devotes 38 pages of his report to discussion and analysis of the efficiency of the market for CenturyLink's 7.60% Notes.¹⁴
- **7.60% Notes Event Study Related to Three Alleged Corrective Disclosure Dates:** On the final three pages of his discussion of market efficiency, he presents the results of his event studies on the 7.60% Notes for each of the three alleged disclosure days, *i.e.*, that there were statistically significant abnormal negative returns on two of those three days.¹⁵
- **Damages Calculations on a Class-Wide Basis:** On the final four pages of his report, Dr. Hartzmark discusses, in very broad terms, a "common" approach to measuring damages for all class members. This proposed method is simply to compare the amount of inflation in the stock (if any) at the date of purchase to the amount of inflation (if any) at the point of sale or the end of the Class Period. In other words, the "common method" is to have someone, at some point, develop one or more inflation ribbons over time, and then use the mathematical technique of simple subtraction.¹⁶

12. It is also important to understand what Dr. Hartzmark has *not* done.

- **No Measure of Initial Inflation:** Dr. Hartzmark has made no investigation and done no event studies to identify or measure any inflation in the CenturyLink stock price at any point in time. He has not proposed any method to review the 52 alleged inflationary days and has not proposed any method to estimate, separately or jointly, the impact of the five categories of allegedly inflationary misrepresentations. Indeed, in his deposition, he went out of his way to make it clear that he had not been asked to even *try* to identify or measure inflation, price effects, or loss causation.¹⁷ In other words, he has neither done, nor described, any method to measure, parse, or scale inflation around the alleged inflationary disclosures and misrepresentations.
- **No Measure of Actual Loss or Damages Associated with the Alleged Corrective Disclosure Dates:** Dr. Hartzmark has made no investigation of whether the three alleged corrective disclosure dates actually corrected any prior misstatements, nor whether any amount of any stock price drop on any date should be attributed to a

¹³ Hartzmark Report, pp. 38–41.

¹⁴ Hartzmark Report, pp. 42–80.

¹⁵ Hartzmark Report, pp. 78–80.

¹⁶ Hartzmark Report, pp. 80–83.

¹⁷ Videotaped Deposition of Michael L. Hartzmark, February 25, 2020 ("Hartzmark Deposition"), 59:4–59:5; 67:15–68:4; 161:22–162:3; 163:15–163:19.

reduction in inflation from any one category (or even the combined set) of allegations. In other words, he has neither done, nor described, any method to measure, parse, or scale inflation around the alleged corrective disclosures.

- **No Measure of Any Inflation Ribbon(s):** Dr. Hartzmark agreed in his deposition that in order to implement his “common method” (inflation ribbon plus subtraction), it would be necessary to have an inflation ribbon. He also went out of his way in his deposition to note that neither he, nor anyone else he identified, had been asked to calculate an inflation ribbon at this stage.¹⁸ He has neither done, nor described, any method to conduct such a calculation that would accurately measure inflation over time in a manner that would parse and scale the inflation ribbons to account for the combinations of the five categories of alleged misrepresentations, the 52 alleged inflationary dates, the nearly year-long alleged “low cramming” period in the middle of the Class Period, and the three alleged corrective disclosure dates.

13. In summary, it appears to be Dr. Hartzmark’s view that, from an economic perspective, it is not necessary to do any investigation of the economic framework or the specific alleged misconduct at the class certification stage, other than market efficiency tests and, perhaps, event studies focused on one or more alleged disclosure days to see if the overall abnormal returns are statistically significant. With regards to the stock price drops on the alleged corrective disclosure dates, he apparently does not find it necessary at this stage to do *any* analysis as to (1) whether *any* portion of any stock or bond price drop on those alleged corrective disclosure days is causally linked to any one or any combination of the allegations, (2) whether these stock price drops reduced or eliminated inflation, (3) whether any inflation even existed in the first place at any point in time associated with one or more of the categories of alleged misrepresentations, or (4) whether the alleged temporary “low cramming” period in the middle of the proposed Class Period means that liability and damages are zero, less, the same, or even greater during that portion of the Class Period.

¹⁸ Hartzmark Deposition, 71:3–72:1; 140:4–141:16.

14. Armed with his “common method” of subtraction, he is simply assuming everything in the Complaint is true at this stage,¹⁹ and that someone else will be able to take care of parsing and scaling damages ribbons to account for the combination of 52 alleged inflationary days, five categories of alleged misrepresentations, the alleged “low cramming” period in the middle of the Class Period, and the three alleged corrective disclosure dates to measure inflation in a manner applicable to all Class members without any need for individualized inquiry.

15. As such, Dr. Hartzmark has not put forward a common economic model of damages consistent with Plaintiffs’ liability case, *i.e.*, that there were many allegedly inflationary misrepresentations, or omissions, of a variety of types, made primarily on earnings announcement and other information-rich dates; that the alleged cramming and related sales norms/culture and practices that allegedly formed the basis of these misrepresentations or omissions it halted for a period of time during the Class Period; and that the various types of fraud were revealed on multiple allegedly curative disclosure dates on which only *accusations* and *investigations* (as opposed to proof) of alleged fraud were announced into an environment primed for fear, uncertainty, and doubt (“FUD”) because of a large-scale fraud committed by Wells Fargo, as described further below.

16. Particularly in light of the evidence mentioned above (and discussed further below) regarding no systematic positive inflationary abnormal returns consistent with Plaintiffs’ liability case, having a model capable of identifying and parsing out alleged misstatements from confounding news and parsing among categories of allegations is important. In addition, having a model that can scale inflation to account for various inflationary and corrective price impacts

¹⁹ Hartzmark Deposition, 150:5–150:16.

would seem essential from an economic perspective. As he noted in his deposition, Dr. Hartzmark agrees that such “parsing and scaling” of the alleged misconduct and its price impact vs. the effects of confounding factors is essential, but he has simply assumed away that modeling challenge in his generic opinions with respect to how to measure such inflation by assuming all of Plaintiffs’ fraud allegations are true at this stage and that someone else will do a loss causation analysis at a later point in time.²⁰

17. Put differently, Dr. Hartzmark’s “common method” is effectively divorced from the specific facts of this, *or indeed any*, case. Nowhere in his report or deposition did Dr. Hartzmark clearly articulate the various categories of alleged misstatements and omissions that his “common method of proof” was supposed to be able to “parse and scale” inflation onto. He admitted that doing so would require case-specific inquiry that he has not done.²¹ He also ignores

²⁰ Hartzmark Deposition. “A ... If it's the case that I at a loss causation analysis were to present an appropriate parsing and scaling approach that the finder of fact determined was not reliable. Okay.” (144:8-12) “You're describing the process one goes through in a loss causation analysis to end up with the inputs for your inflation ribbon; correct? A Yes. Q Parsing out the fraud-related from the nonfraud-related, perhaps scaling it, depending if there have been changes over the course of the class period; correct so far? A Yes.” (145:7-16) “Q ... My question to you is: How do you know it can be done in this case? What work have you done to get comfortable that that parsing and scaling is possible here -- in this case? A. Again, what I've said is that it is -- whatever that input is will be applied classwide. Q You're skipping over the work that's necessary to get to the input.” (146:2-18, objection omitted) “I will say that with respect to the corrective disclosures, they are not earnings announcements, which are often the case and require parsing, because there's multiple information that's disclosed. But with respect to the corrective disclosures in this matter, to the extent that one assumes, as I have, that they are proven to be corrective disclosures and correcting a fraud that has taken place, then there's likely no confounding information and possibly no reason to parse.” (150:5–150:16.)

²¹ Hartzmark Deposition. “A: It's my understanding that the plaintiffs have alleged that CenturyLink misrepresented or omitted information related to their pricing and billing policies and strategy. Q: Anything else? A: I would say that sort of generalizes it. Q: What is your understanding of the fact or facts that plaintiffs claim CenturyLink concealed during the class period? A: It's my understanding ... Again, the facts associated with billing and pricing and the so-called, I think – I believe it's called and cited into the case – cramming approach to sales. Q: Without looking at the complaint, can you be any more specific than that, or is that your understanding? A: That's my general understanding, yes. (56:14–57:15; objections and interjections omitted) “Q: Do you have an opinion as to whether the statements under each of those categories [four categories of allegedly false and misleading statements] affected CenturyLink's stock price? ... THE WITNESS: I've not been asked to evaluate loss causation or price impact.” (58:25–59:5; objection omitted); “Q: So, in other words, you cannot conclude scientifically that there has been any abnormal return to the stock price on the date of the challenged statement [where you observe no statistically-significant abnormal return to the stock price] ... A: ... you can't come up with a conclusion associated with the price impact simply from the event study.” (64:25–70:2; objections, clarifying questions, and non-responsive answers omitted) “A: ... As to exactly how you do the loss causation or price impact, I have not done that at this

Plaintiffs’ contention that CenturyLink reduced or halted cramming for a period of time, that this alleged year-long change was a causal factor in adversely impacting revenue, and that if true, such facts could reasonably lead to changes in inflation over time—and even its elimination for a period of time—that his “common method” does not address. Nevertheless, Dr. Hartzmark testified that his “common method” is applicable to any situation. As he noted in his deposition, even if the inflation ribbon were zero throughout the Class Period, the “damages method still applies.”²² While this is technically an accurate statement, since his “common method” is simply subtraction, it is not an economically useful statement, and provides no assistance to the finder of fact in determining whether a common method of actually calculating inflation can be developed in this particular case with the complex set of alleged inflationary statements, corrective disclosures, and intervening alleged facts.

3. *Relevance of the Economic Framework at the Class Certification Stage*

18. It is important to consider Dr. Hartzmark’s opinions in the context of the allegations in this Action, as opposed to some simpler, hypothetical example of alleged securities fraud. An implication of his framework and opinions appears to be that there are no economic or fact-specific issues that are relevant to class certification other than market efficiency, a few abnormal negative stock price changes, and the concept of using an inflation ribbon plus subtraction. I disagree. While a full analysis of loss causation and price impact typically does not occur at the class certification stage, it is too simplistic to not provide *any* economic framing of the core issues or any outline for the mapping of the various allegations to inflation ribbon(s).

stage as it relates to CenturyLink.” (70:14–24) “A: I know how to do it [loss causation] in a specific case. Each case is different. (71:12–13)

²² Hartzmark Deposition, 138:8–138:11.

Simply citing the concept of an inflation ribbon, identifying the use of subtraction, assuming a filed complaint will be shown to be true, and noting that someone later will estimate an inflation ribbon regardless of the complexity of the allegations, would effectively endorse the certification of a securities class action in *virtually every case* where a stock price dropped and the drop is framed as a “corrective disclosure.”

19. This need for the proposed common method of proof to be applicable in the economic framework of the specific case at hand is particularly obvious in this Action, given the broad facts and allegations and the complex combination of categories of allegations, inflation, and disclosures, for the following reasons:

20. First, Plaintiffs have alleged five categories of allegedly inflationary misrepresentations ranging from inflated revenue reporting to comments regarding corporate culture. Dr. Hartzmark has given no indication of how these different types of alleged misstatements might have differential price impacts—which they very well could.

21. Second, the supposed inflation could have occurred on 52 market days. On most of these days, however, there was no statistically significant stock price movement. On many of these days there was regular reporting of many and varied quarterly and/or annual financial and operational results and forecasts, of which there have been no restatements. Dr. Hartzmark has done nothing to explain how Plaintiffs would go about “parsing and scaling” the allegedly inflationary misrepresentations (of various types) and their price impacts from the many pieces of confounding news and their price impacts. It is not at all clear that this can even be done.

22. Third, Plaintiffs’ theory of liability alleges that CenturyLink altered—and perhaps even halted—rather than maintained its allegedly inflationary cramming practices for a period in the middle of the Class Period. If this is the case, any inflation ribbon(s) would likely change in

height (price impact)—and quite possibly even be severed—during the Class Period. Dr. Hartzmark has made no mention of this peculiarity in this Action—and how it may very well require individualized (or at least sub-Class) inquiry—in his generic discussion of inflation measurement.

23. Fourth, the supposed corrective disclosures were not *findings* or *admissions* that CenturyLink had, in fact, been employing widespread cramming that was likely to have a major impact on its past or future financial results or business operations. Instead, they were the announcement of *allegations* and new *investigations* of such purported conduct, with an invocation of potential “Wells Fargo-like” concerns.²³ Plaintiffs have neither articulated, even in broad strokes, how to parse the substance/truth of the allegations from the FUD they triggered, especially in an environment of heightened concern about other Wells Fargo-like corporate issues, nor proposing any way to scale a common inflation ribbon measuring the price impact of the truth vs. the FUD. As such, it is very uncertain how or even whether such parsing could be done to reliably identify the common price impact of any true fraud in this particular case.

24. Failing to do any substantive economic analysis (including parsing and scaling) of any of the myriad alleged front-end inflationary misrepresentations and their price impacts independent of confounding factors, failing to consider how Plaintiffs’ allegations of a reduction and possibly even halting of allegedly inflationary behavior might change—or even break—the inflation ribbon over the proposed Class Period, and failing to do any economic analysis as to the accuracy or ultimate substance of the alleged corrective disclosures and how any accuracy/substance of the allegations vs. FUD about them impacted the price of CenturyLink

²³ “CenturyLink Faces Class-Action Lawsuit Seeking Up to \$12 Billion,” *Bloomberg*, June 19, 2017.

securities on those days provides, at best, an incomplete presentation of the economic framework for the fact finder to use in determining whether a proposed class is appropriate for certification on common issues and whether there is a common method of proof and calculation of damages.

B. Assignment

25. I have been asked to address a number of economic issues in this Report. I focus first on the economic framework discussed above, which is completely absent from the Hartzmark Report. I then provide analysis related to his actual opinions, including analysis and critique of his event study methodology for both CenturyLink's equity and its 7.60% Notes.

C. Qualifications

26. I am an economist and Managing Principal (partner) at Analysis Group, an economic and financial consulting firm with over 1,000 professional staff in offices throughout the United States, as well as offices in China, Canada, and Europe. I lead the economic consulting practice in the Menlo Park, California office of Analysis Group.

27. I have served as an expert witness and consulting expert in a wide variety of litigation matters. I have served as a testifying expert in dozens of matters, covering a range of issues including class certification, liability, and damages. My class action work has covered a variety of industries and practice areas, including finance and securities litigation. I have served as a testifying expert evaluating class certification issues in a number of matters, including in the recent matter *Martin et al. v. Blue Shield of California*, in which Blue Shield successfully challenged class certification involving health insurance premium setting. The decision was upheld by the California Court of Appeals, which cited my work. I served as a testifying expert on damages in *Attorney General of the State of Washington v. Comcast*, a case involving

cramming allegations in which the judge ultimately found that Comcast owed less than 10 percent of the \$100+ million claimed by the Attorney General. I have led Analysis Group teams on a number of securities matters, many involving 10b-5 claims. These include securities class action matters for Ernst & Young, AT&T, Oracle, Williams, and Alibaba. I have also published a number of book chapters and articles, and have presented on topics such as stock option backdating, the subprime mortgage crisis and disclosures, and NASDAQ market maker litigation. A copy of my CV, together with a list of the trial and deposition testimony I have given in the last four years, is attached as **Appendix A**.

28. Analysis Group is compensated at the rate of \$850 per hour for my time. Research and analysis for this Report was also performed by Analysis Group personnel under my direction and guidance. Neither my compensation nor that of Analysis Group is contingent upon my findings, the testimony I may give, or the outcome of this litigation.

D. Facts and Data Considered

29. In forming my opinions, I have reviewed documents and other materials provided to me by counsel for CenturyLink or obtained from public sources. These materials include, among others, the Hartzmark Report, CenturyLink's SEC filings, analyst reports, news articles, relevant academic research, legal documents, and data and documents produced by Dr. Hartzmark. The sources on which I rely are identified in this report and the accompanying exhibits, or are listed in the attached **Appendix B**.

30. I understand that discovery is ongoing. Should additional relevant documents or information become available to me, I may adjust or supplement my opinions as appropriate.

II. SUMMARY OF OPINIONS

31. The following is a summary of my principal conclusions concerning class certification issues. This summary is provided for ease of use for the reader. The full set of my conclusions and analyses is contained in the body of this Report and the associated exhibits.

32. Many factors influenced CenturyLink's stock and bond prices over the multi-year Class Period proposed by Plaintiffs. Dr. Hartzmark's opinion that "the calculation of damages for violations of Section 10(b) of the Exchange Act ... are subject to a common methodology and may be computed on a class-wide basis for both the common stock purchasers and the 7.6[0]% Note purchasers"²⁴ is not well supported in the context of the facts of this particular case. Here, for the conceptual and empirical reasons elaborated on below and throughout my Report, neither the start, the end, nor the size of the inflation ribbon is subject to a common methodology that can be reliably computed on a class-wide basis. There has been no method proposed by Plaintiffs that would, from an economic perspective, accurately estimate, parse, and scale inflation, if any, from the combination of 52 alleged inflationary dates, five categories of alleged misrepresentations, an alleged "low cramming" period, and three alleged corrective disclosure dates.

33. Plaintiffs allege that each and every one of CenturyLink's quarterly earnings announcements and calls, its quarterly and annual SEC filings, and its remarks at multiple investment conferences over the entire 4+ year Class Period *all* contained combinations of the five categories of false and misleading statements or omissions. Plaintiffs, however, do not explain the significance of any particular alleged misstatement or omission—or even all the

²⁴ Hartzmark Report, p. 6.

alleged misstatements and omissions combined—on any particular day. Nor do they describe how alleged misinformation would be separated from alleged fraud and the resulting measurement of inflation.

34. Based on research summarized in this Report, I have identified many new pieces of information on those specific days that have little or no relation to the “cramming” allegations that appear to be the heart of Plaintiffs’ allegations. Based on my training and experience evaluating the effects of such information as an economist, as well as my review and consideration of professional analyst commentary in response to all the news disclosed on those days, it is unclear what effect—if any—the alleged misstatements or omissions had on the price of CenturyLink’s stock price on the 52 alleged inflationary days identified by the Plaintiffs. As such, there is no way to reliably calculate when—or even if—the alleged inflation actually started for one or more categories of allegations, let alone how much inflation there may have been at any particular time associated with any particular allegation.

35. Complicating the matter further, Plaintiffs allege five different categories of allegedly inflationary misrepresentations, propose a long Class Period during which time CenturyLink and the telecom industry as a whole underwent massive change, and claim that CenturyLink’s cramming behavior and its revenue impact changed over this time period, including a period where the disputed activity effectively paused. However, Plaintiffs’ expert, Dr. Hartzmark, has not offered a damages model capable of identifying the price impact, if any, of the various types and degrees of allegedly inflationary misconduct and has not proposed how to separate price impacts attributable to other non-fraud factors in this dynamic economic context.

36. Furthermore, Plaintiffs allege three curative disclosure dates where similar and overlapping allegations were made public: June 16, June 19, and July 12, 2017. Based on research and analysis summarized in this Report, there are many reasons why it is far from certain that these are, in fact, curative disclosure dates that contain any actual news of one or more categories of fraud. First, the alleged curative disclosures are not disclosures of findings or facts, but simply disclosures of additional allegations contained in legal complaints and the beginning of an investigation. Second, news about suspicions, allegations, and investigations of cramming in the telecom industry had been publicly disclosed or available for many years prior to these mid-2017 alleged curative disclosure dates, and Plaintiffs have not proposed any method to identify the incremental effect, if any, of the allegations in this action. Third, the negative abnormal equity return on one of the three dates, June 19, 2017, has weak statistical significance in Plaintiffs' expert's event study model, and no statistical significance in much better fitting event study models. Similarly, one of the three dates, June 16, 2017, has no statistical significance for the 7.60% Notes in a better specified event study model than the one developed by Plaintiffs' expert. Fourth, it is unclear what, if any, additional substantive information was disclosed in any of the three, and especially the latter two allegedly curative disclosures. Fifth, analysis of intraday news events and subsequent stock price movements on these days reveals patterns that are inconsistent with a common reaction to a "revelation of the truth" and a uniform assessment of its impact.

III. BACKGROUND

A. Plaintiffs' Allegations

37. Plaintiffs allege that CenturyLink routinely misquoted prices for services and improperly billed consumer and small business customers for services they did not request, a

practice they refer to as “cramming.”²⁵ Plaintiffs claim that CenturyLink and the Executive Defendants²⁶ named in the Action (collectively, “Defendants”) made materially false and misleading statements and omissions over the Class Period:

*Defendants falsely attributed CenturyLink’s substantial revenue and subscriber growth in its consumer and small business segments to the Company’s focus on ‘customer needs’ and its ‘customer first’ sales approach, competitive ‘bundling’ marketing strategy, and strict adherence to the Company’s Unifying Principles: ‘fairness, honesty and integrity.’*²⁷

38. Plaintiffs claim that these statements misrepresented the Company’s current and projected financial condition, revenue, and earnings,²⁸ and led them to purchase Company securities at artificially inflated prices such that when Defendants’ statements and omissions were later revealed to be false and misleading, the price of CenturyLink’s securities dropped and Plaintiffs and the Class suffered losses.²⁹

39. Plaintiffs describe five different categories of allegations relating to cramming and fraudulent billing, including potential fraud related to the Company’s (1) “customer first” business strategy, (2) financial performance drivers, (3) reasons given for its “fluctuating financial results,” (4) business practices related to sales and billing, and (5) “material omissions under Item 303 (management discussion of financial results).”³⁰ They further allege that the Company implemented an experimental “low cramming” period in the middle of the Class Period that

²⁵ Complaint, ¶ 1.

²⁶ Executive Defendants in this action include CenturyLink’s former CEO Glen F. Post, III, former CFO R. Stewart Ewing, Jr., former Executive Vice President and Controller David D. Cole, former Global Head of Sales Karen Puckett, former President of Sales and Marketing Dean J. Douglas, and former Vice President and Treasurer G. Clay Bailey. *See* Complaint, p. 2.

²⁷ Complaint, ¶ 3.

²⁸ Complaint, ¶ 265.

²⁹ Complaint, ¶ 264.

³⁰ Complaint, ¶ 190.

significantly impacted revenues.³¹ Plaintiffs also analogize their *allegations* of cramming-related misconduct to *findings* during the Class Period that a much larger financial institution, Wells Fargo, did in fact engage in fraudulent billing.³²

40. Plaintiffs allege three curative disclosures regarding the Company's billing practices and financial condition:

- **Friday, June 16, 2017:** an article was published discussing a lawsuit filed by a former employee accusing CenturyLink of cramming.
- **Monday, June 19, 2017:** additional reports were published discussing the filing of a cramming-related consumer class action litigation.³³
- **Wednesday, July 12, 2017:** the Minnesota Attorney General ("Minnesota AG") announced a lawsuit against the Company.³⁴

B. Summary of Dr. Hartzmark's Opinions

41. As discussed earlier, Plaintiffs' expert, Dr. Hartzmark, provides five main opinions in his report. His first two opinions are that CenturyLink's common stock and CenturyLink's 7.60% Notes each traded in an efficient market throughout the Class Period.³⁵ His third opinion is that, although he was not asked to quantify actual damages, the calculations of damages for purchasers of both CenturyLink common stock and CenturyLink's 7.60% Notes are subject to a common methodology and may be computed on a class-wide basis.³⁶ His sole support for this

³¹ Complaint, ¶¶ 109–120.

³² See, for example, Complaint, ¶ 16. "The truth concerning the Company's fraudulent practices began to be revealed on June 16, 2017, when Bloomberg published a story revealing that a CenturyLink whistleblower, Heiser, was fired after raising her concerns about the Company's fraudulent business practices with Defendant Post. That article, titled 'CenturyLink Is Accused of Running a Wells Fargo-Like Scheme,' addressed Heiser's account of CenturyLink's practice of charging customers for services they did not request, the striking parallels to the Wells Fargo scandal, [...]"

³³ Complaint, ¶ 17.

³⁴ Complaint, ¶¶ 18–19.

³⁵ Hartzmark Report, pp. 5–6.

³⁶ Hartzmark Report, pp. 5–6.

third opinion, in addition to the concept of subtraction, is that, according to his equity event study (his fourth opinion), the abnormal returns on the three alleged curative disclosure dates for CenturyLink's equity were negative and statistically significant,³⁷ and similarly (his fifth opinion) that the abnormal returns on the three alleged curative disclosure dates for CenturyLink's 7.60% Notes were negative and statistically significant using his bond price event study.³⁸

C. Overview of CenturyLink and the U.S. Telecommunications Industry

1. Overview of CenturyLink's Business

42. CenturyLink is an integrated telecommunications company headquartered in Monroe, Louisiana that primarily provides local and long-distance, broadband, voice, wireless, and managed services to households and businesses.³⁹ As of the start of the Class Period in 2013, it also offered entertainment services under the CenturyLink Prism TV and DIRECTV brands.⁴⁰ In 2011, following a series of major acquisitions (which I describe below), the Company expanded its services to include cloud hosting, managed hosting, colocation, and network services. As I also discuss below, the past decade has been a difficult one economically for companies providing services such as those offered by CenturyLink.

43. Over the Class Period, CenturyLink reported four non-financial operating metrics: access lines, broadband subscribers, Prism TV subscribers, and data centers. According to CenturyLink's SEC filings, access lines are lines reaching from the customer's premises to a

³⁷ Hartzmark Report, p. 38.

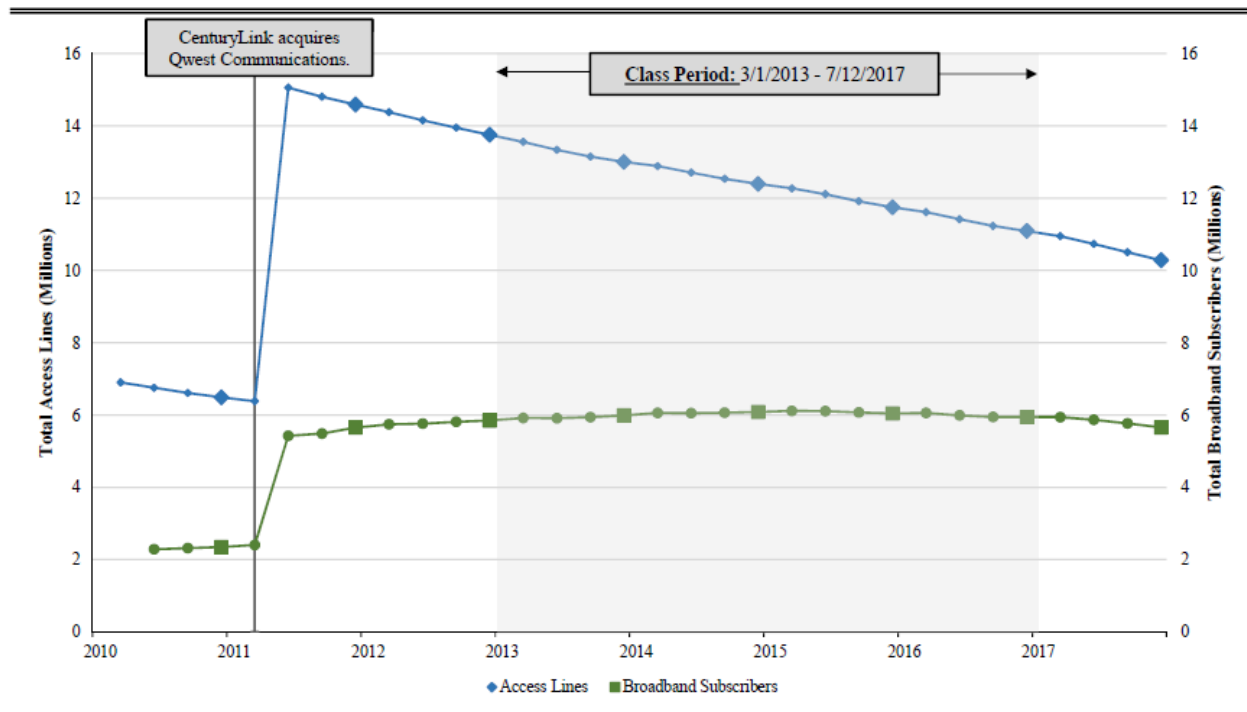
³⁸ Hartzmark Report, Exhibit 21.

³⁹ "CenturyLink, Inc.," *MarketLine*, January 2013, p. 2. *See also* CenturyLink 10-K (2014), p. 3.

⁴⁰ CenturyLink 10-K (2013), pp. 6, 7.

connection with the public switched telephone network (“PSTN”)⁴¹ and broadband subscribers are “customers that purchase [broadband] internet connection service through their existing telephone lines, stand-alone telephone lines, or fiber-optic cables.”⁴² **Exhibit 1** provides information on trends in these operational metrics at CenturyLink between 2010 and 2018. **Exhibit 2** (replicated below as **Figure 1**), shows that between 2011 and 2018, there was a steady decline in access lines.

Figure 1
Selected CenturyLink Operational Metrics 2010-2017



44. Over the same period, the number of broadband subscribers grew moderately from the time of the Qwest acquisition in Q2 2011, peaking at 6.1 million in Q1 2015, then shrank

⁴¹ CenturyLink 10-K (2014), pp. 4, 5.

⁴² CenturyLink 10-K (2014), p. 4.

moderately through the end of the Class Period. By the end of 2016, CenturyLink had 325,000 Prism TV subscribers and 58 data centers.⁴³ CenturyLink decided to discontinue Prism TV in or around 2018 and entered into an agreement to sell its data centers in 2016.⁴⁴

2. *Recent Company History and Acquisitions*

45. Between 2009 and 2017, CenturyLink made a series of acquisitions that improved its offerings to its business customers by strengthening its platform-as-a-service and infrastructure-as-a-service offerings, disaster recovery operations, and “Big Data” and cloud service capabilities.⁴⁵ These include:

- On July 1, 2009, CenturyLink acquired Embarq, a provider of data, internet, video, and voice services for stock worth about \$6.1 billion in value on the date of the acquisition.⁴⁶
- On April 1, 2011, CenturyLink acquired Qwest, a national and global provider of data, broadband, video, and voice services for an aggregate consideration of \$12.273 billion and the assumption of about \$12.7 billion in long-term debt.⁴⁷
- On July 15, 2011, CenturyLink acquired Savvis, a provider of cloud hosting, managed hosting, colocation, and network services in domestic and international markets. The total consideration for the deal was \$2.382 billion.⁴⁸ After the acquisition of Embarq, Qwest, and Savvis, analysts noted that approximately 60 percent of CenturyLink’s topline revenue was derived from business services.⁴⁹
- On October 31, 2016, CenturyLink entered a definitive merger agreement in which it proposed to acquire Level 3 Communications, another business-customer

⁴³ See **Exhibit 1**; CenturyLink 10-K (2016), pp. 5, 49.

⁴⁴ See CenturyLink 10-K (2016), pp. 5, 49; “CenturyLink no longer working to expand Prism TV service,” *FierceVideo*, April 10, 2018. Available at: <<https://www.fiercevideo.com/cable/centurylink-no-longer-working-to-expand-prism-tv-service>>.

⁴⁵ These acquisitions included AppFog, Inc., and Tier 4, Inc. in 2013, DataGardens and Cognilytics in 2014, and Orchestrate in 2015. See “Company History,” *CenturyLink*, accessed on February 29, 2020. Available at: <<https://news.centurylink.com/company-history>>.

⁴⁶ CenturyLink 10-K (2012), p. 4.

⁴⁷ CenturyLink 10-K (2012), p. 4.

⁴⁸ CenturyLink 10-K (2012), p. 3.

⁴⁹ “CenturyLink, Inc. 4Q12 Preview: Finishing a Strong 2012; Looking ahead to 2013,” *Morgan Stanley*, February 11, 2013, p. 3.

focused telecommunications company.⁵⁰ The acquisition was completed on November 1, 2017, a few months after the end of the Class Period.⁵¹

3. *Overview of the Telecommunications Industry During the Class Period*

46. The telecommunications market can be segmented into wireline telecommunication carriers, wireless telecommunication carriers, communications hardware manufacturers, and satellite and telecommunication resellers.⁵² Wireline telecom companies like CenturyLink sell voice and data services, including traditional landline phone service, Voice over Internet Protocol (“VoIP”) calling service, internet connectivity, and television services through Internet Protocol Television (“IPTV”) to consumers. According to *Market Realist*, “[t]hey also sell advanced services in video conferencing, high bandwidth dedicated lines, and secured communication setups to their large customers.”⁵³

47. The telecommunications industry experienced substantial challenges during the Class Period.⁵⁴ The wireline voice segment shrank as customers continued to migrate to wireless and VoIP services.⁵⁵ Firms like CenturyLink responded by offering bundled “triple play” services (phone, internet, and TV combined), which require a high-speed broadband network.⁵⁶

⁵⁰ CenturyLink 10-K (2016), p. 3. Level 3 Communications provides “communications and services like data, voice and video transmission for large enterprises.” (“CenturyLink, a Network Provider, to Acquire Level 3, a Rival,” *NYTimes*, November 1, 2016. Available at: <<https://www.nytimes.com/2016/11/01/business/dealbook/centurylink-a-network-provider-to-acquire-level-3-a-rival.html>>.)

⁵¹ CenturyLink 10-K (2018), p. 6.

⁵² “An overview of the US telecom industry,” *Market Realist*, January 16, 2015. Available at: <<https://marketrealist.com/2015/01/overview-us-telecom-industry/>>.

⁵³ “An overview of the US telecom industry,” *Market Realist*, January 16, 2015. Available at: <<https://marketrealist.com/2015/01/overview-us-telecom-industry/>>.

⁵⁴ “Top 10 risks in telecommunications 2014,” *EY*, 2014, p. 5.

⁵⁵ “Investor Must-know: Major Trends in the Wireline industry,” *Market Realist*, January 16, 2015. Available at: <<https://marketrealist.com/2015/01/investor-must-know-major-trends-wireline-industry/>>.

⁵⁶ See “Investor Must-know: Major Trends in the Wireline industry,” *Market Realist*, January 16, 2015. Available at: <<https://marketrealist.com/2015/01/investor-must-know-major-trends-wireline-industry/>>. The dramatic shifts in wireline and broadband segments of the industry are evident in a March 2018 report by a broadband industry trade

Industrywide, average revenue per user (“ARPU”) in North America fell at a compound annual rate of two percent over the years 2011–2016.⁵⁷ In 2014, Ernst & Young noted: “[A] number of structural pressures — from regulation on core service areas to increased competition from over-the-top (‘OTT’) players [such as Skype] — mean that market conditions remain challenging.”⁵⁸ By 2017, according to a report by PwC, many telecom carriers were facing “significant decreases in their basic communication service revenues ... [c]ombined with intense competition due to lagging industry consolidation, this pattern has led to steep declines in average revenue per user; at best, minimal revenue growth; and tightening margins.”⁵⁹

4. *CenturyLink’s Prospects, Growth, and Stock Price During the Class Period*

48. In January 2013, a report by *MarketLine* identified CenturyLink’s “broad portfolio of offerings” and “robust network infrastructure” as strengths, but noted the Company’s “declining profit margins” and “significant debt obligations” as weaknesses.⁶⁰ The same report identified several threats to the Company, including intense competition, the prospect of significant regulation, and technological change.⁶¹

association, USTelecom. The report projected that between 2000 and 2017, wired residential connections had declined from about 120 million to 19 million while residential broadband connections over the same time period had increased from five to about 100 million. As of 2017, it estimated that nearly 80 percent of U.S. household had fixed broadband (“high-speed internet”). See “USTelecom: Industry Metrics and Trends 2018,” *USTelecom*, March 2018, pp. 3, 4, 14, and 15. Available at: <<https://www.ustelecom.org/wp-content/uploads/2018/12/USTelecom-Industry-Metrics-and-Trends-2018.pdf>>.

⁵⁷ “2017 Telecommunications Trends: Aspiring to digital simplicity and clarity in strategic identity,” *PwC Strategy&*, 2017, p. 5.

⁵⁸ “Top 10 risks in telecommunications 2014,” *EY*, 2014, p. 5.

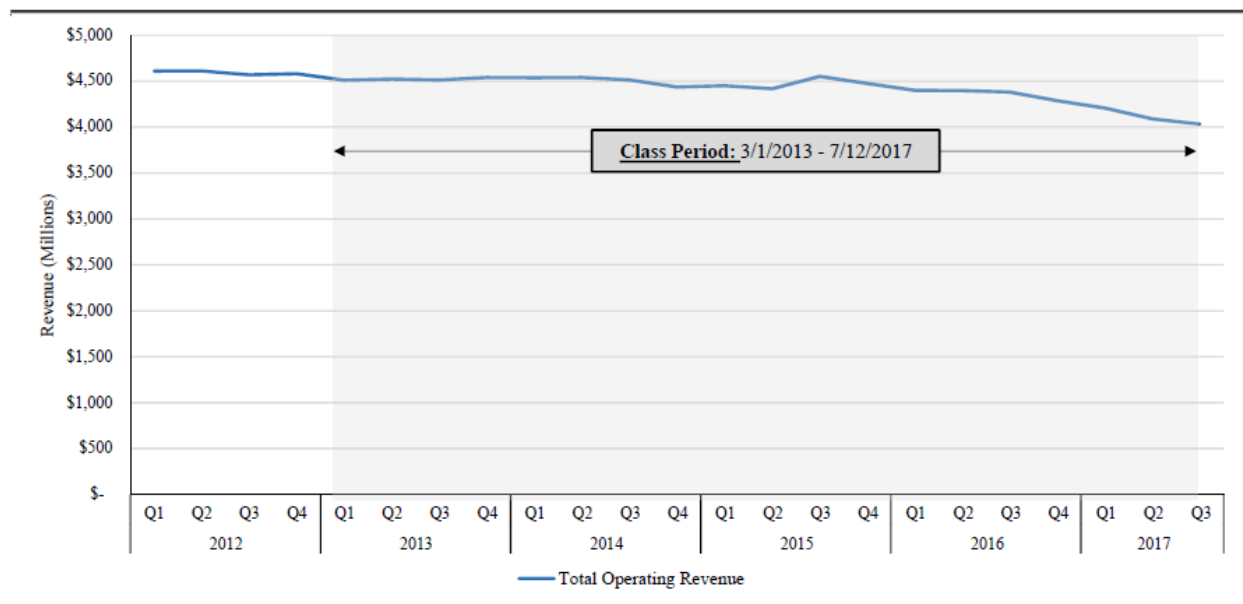
⁵⁹ “2017 Telecommunications Trends: Aspiring to digital simplicity and clarity in strategic identity,” *PwC Strategy&*, 2017, p. 4.

⁶⁰ “CenturyLink, Inc.,” *MarketLine*, January 2013, p. 30.

⁶¹ “CenturyLink, Inc.,” *MarketLine*, January 2013, pp. 33–34.

49. From the start of the Class Period in March 2013 to Q3 2015, CenturyLink's quarterly operating revenue had remained relatively stable at around \$4.5 billion. Starting with Q4 2015, CenturyLink's quarterly operating revenue declined steadily to end at about \$4.1 billion in Q2 2017, near the end of the Class Period. (See **Exhibit 3**, replicated as **Figure 2** below.)

Figure 2
Quarterly Total Operating Revenue 2012-2017



50. Between 2013 and 2017, revenue from CenturyLink's Legacy services and Strategic services declined and rose, respectively (See **Exhibit 4A** and **Exhibit 4B**.) By 2014, Legacy services (primarily local and long-distance wireline calling) contributed approximately half of CenturyLink's Consumer revenue. These services faced high line attrition and intense competition and product switching from cable and wireless. According to a 2015 research report by Cowen and Company, "the legacy services story is about managing the natural decline (down

7.2% Y/Y in 2014) due to migration/substitution.”⁶² The same report projected a compound annual growth rate (“CAGR”) of -5.2% in the Company’s Consumer Legacy services over the years 2015–2020.⁶³ A May 2016 Wells Fargo report noted that, “the ‘good’ part of CTL’s revenue (Strategic Services) is growing at a slower rate than its legacy revenue declines. In addition, the declining revenue is higher margin than the growth revenue.”⁶⁴ Strategic Services “enable ... customers to access the Internet, connect to private networks and transmit data, and enhance the security, reliability, and efficiency of ... customers’ communications.”⁶⁵

51. Consistent with the economic challenges in the industry, the overall trend in CenturyLink’s stock price over the Class Period was downward (*see Exhibit 5A*, replicated below as **Figure 3**.)

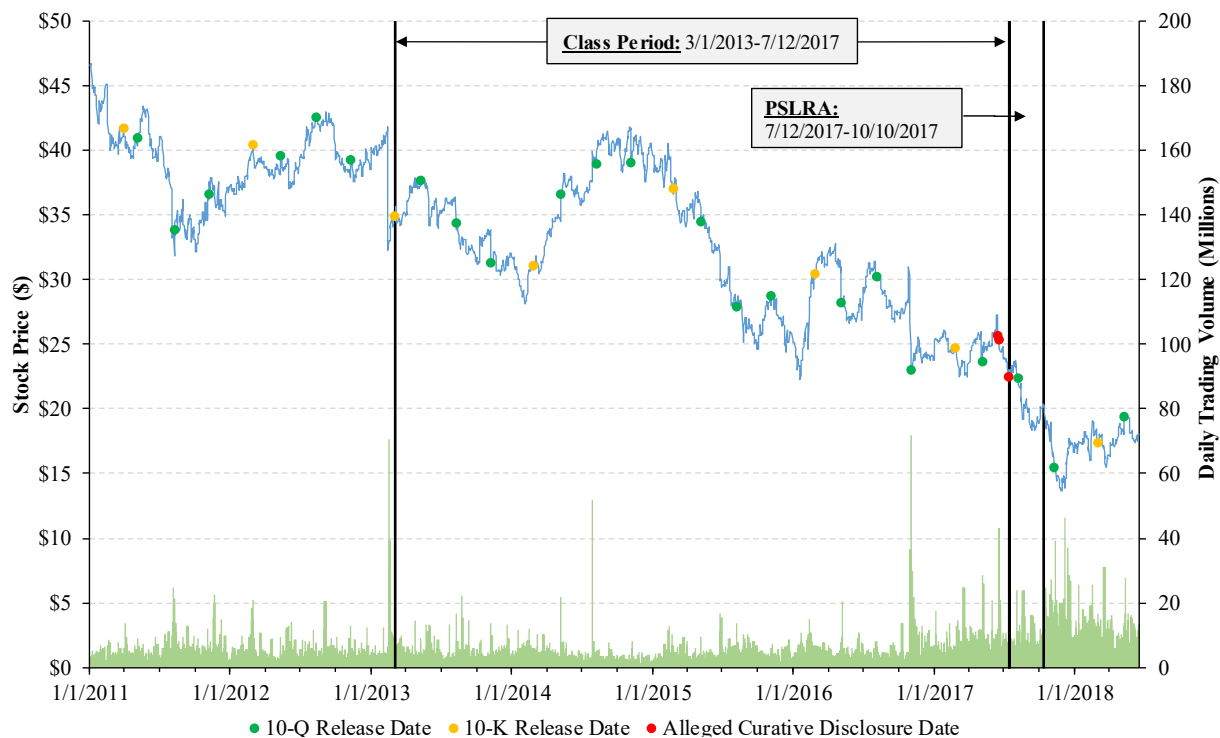
⁶² “Initiate: Compelling Turnaround Story, but We Look for Top-Line Stability First,” *Cowen and Company*, October 13, 2015, pp. 15–16.

⁶³ “Initiate: Compelling Turnaround Story, but We Look for Top-Line Stability First,” *Cowen and Company*, October 13, 2015, pp. 15–16.

⁶⁴ “CTL: Downgrading To Market Perform: It Was A Fun Run; But LT Structural Concerns Exist,” *Wells Fargo*, May 3, 2016, p. 1.

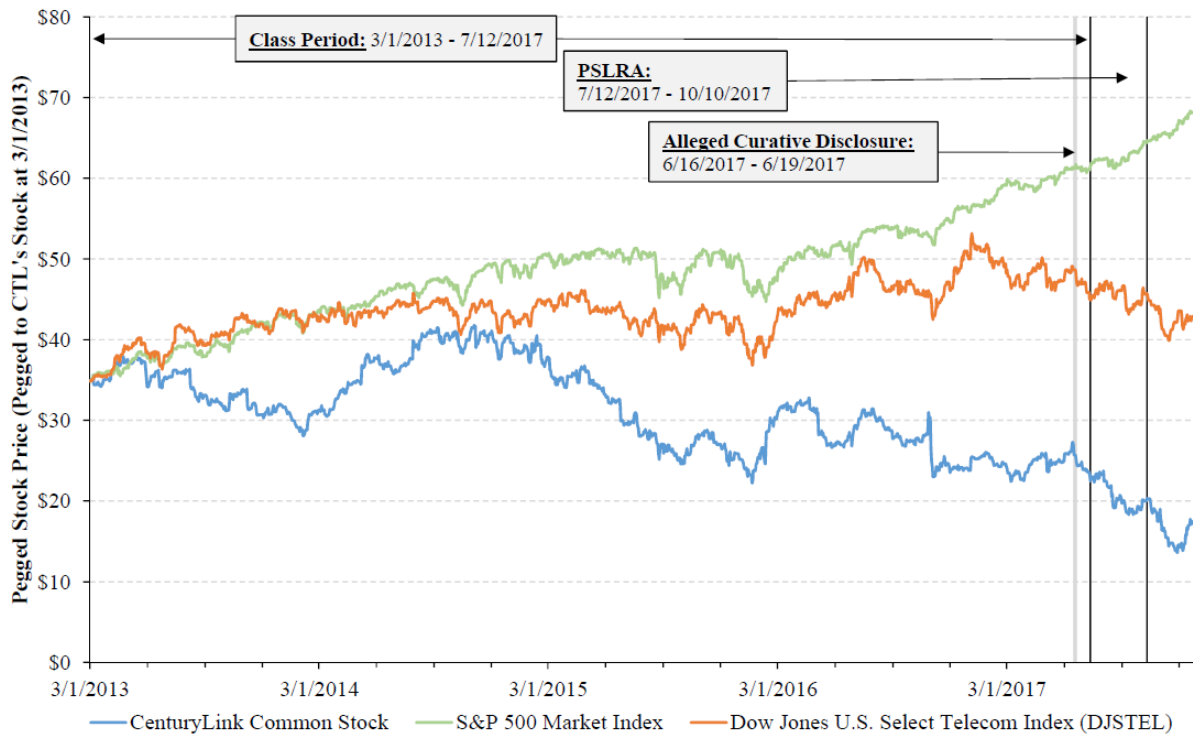
⁶⁵ CenturyLink 10-K (2016), p. 7.

Figure 3
CenturyLink Common Stock Price and Volume
Jan 2011 - June 2018



52. CenturyLink's stock price also substantially underperformed the broader market and industry. (See **Exhibit 5B**, replicated below as **Figure 4**.)

Figure 4
CenturyLink Common Stock Price with Pegged Market and Industry Indices
March 2013 - December 2017



IV. ECONOMIC FRAMEWORK: FOCUS ON ALLEGEDLY INFLATIONARY STATEMENTS

53. As discussed, Dr. Hartzmark did not provide any substantive analysis associated with the economic framework in this Action. Rather, he simply assumed that Plaintiffs' allegations were true. While a full loss causation analysis is typically done at a later stage of the litigation, in assessing common issues, it is important from an economic perspective to evaluate the allegations and identify the reasonableness of an assumption of truth and how, if at all, the combination of categories of allegations, alleged inflation dates, and alleged corrective disclosure dates would translate into a common method of calculating damages. In this section, I provide economic analysis to show that an overarching assumption of truth of the allegations in

the Complaint is neither warranted nor sufficient to support a conclusion that a common method of estimating price inflation can be developed in this Action.

A. General Allegations of Fraudulent Billing Practices in the Telecom Industry and at CenturyLink Were Not News

54. Implicit in the assumption of the complete accuracy of the allegations in the Complaint is an underlying assumption that investors were unaware of the types of information in the corrective disclosures prior to their disclosure. If that is not the case, then one must be able to identify how those allegations differ from the prior general disclosures that were known to investors. Dr. Hartzmark does none of this analysis.

55. I find that the underlying premise that the alleged curative disclosures were effectively revelations of a previously unknown truth is unsupported. Allegations of cramming, or charging “unauthorized, misleading, or deceptive charges in a consumer’s telephone bill,”⁶⁶ are nothing new, and date back at least to the 1990s (well before the beginning of the Class Period), when telecom companies began offering third-party services. These third-party companies were able to add extra charges through the telecom companies’ billing platforms.⁶⁷ News of these, and similar, concerns have been widespread ever since, and carriers as well as third-party providers have repeatedly been publicly implicated. The U.S. government has performed numerous investigations into the issue of “cramming,” and lawsuits and enforcement action against several major U.S. telecom providers—including CenturyLink—have been well-publicized.

⁶⁶ “Telecommunications: Updates on State-Level Cramming Complaints and Enforcement Actions,” *The U.S. Government Accountability Office (GAO)*, January 31, 2000, p. 2.

⁶⁷ “Unauthorized Charges on Telephone Bills, Staff Report for Chairman Rockefeller,” *The Committee on Commerce, Science, and Transportation*, July 12, 2011, p. i (cited in Complaint, ¶ 45).

I. *The Pervasiveness of Cramming Allegations and Enforcement Actions Across the U.S. Telecommunications Industry Is a Well-Publicized Issue*

56. Examples of public disclosures regarding allegations and investigations of cramming in the U.S. telecom sector, as well as enforcement actions against major U.S. telecom providers over the past 20 years abound. Examples of such disclosures include the following:

- In October 1999, the U.S. Government Accountability Office (“GAO”) testified before the U.S. Senate Committee on Small Business about the severity of cramming, primarily by billing aggregators and vendors:

*Overall, we found that consumers' complaints to state authorities about **cramming** rose dramatically from about 850 in 1996 to nearly 20,000 in 1998. While only 3 states reported receiving **cramming** complaints in 1996, the total increased to 36 states by 1998. At the federal level, **cramming** complaints became the fourth most common type of written complaint received by the Federal Communications Commission (FCC) and the second most common type of complaint received by the Federal Trade Commission (FTC) during 1998. Four major regional telephone companies reported to us that they received a combined total of about 160,000 unconfirmed **cramming** complaints during 1998, and a fifth company reported substantially more than that number during 1998.⁶⁸*
[Emphasis added]

- In January 2000, the GAO testified to Congress on cramming again, reporting additional evidence of ongoing abuse, and noting that “[p]hone companies can **cram** consumers by adding unauthorized charges for telephone services, such as call messaging.”⁶⁹ [emphasis added]
- In July 2011, the Committee on Commerce, Science and Transportation published an extensive report of its investigation into cramming, as requested by then-Chairman Senator John D. (Jay) Rockefeller. Companies solicited for the investigation included CenturyLink, Windstream, Frontier Communications, AT&T, Verizon, and Qwest. According to the report, “[t]he evidence obtained through this investigation suggests that third-party billing is causing extensive financial harm to all types of landline telephone customers” and that “over the past decade, telephone customers appear to have been scammed out of billions of

⁶⁸ “Overview of the Cramming Problem,” GAO, October 25, 1999, p. 1.

⁶⁹ “Telecommunications: Updates on State-Level Cramming Complaints and Enforcement Actions,” *The U.S. Government Accountability Office (GAO)*, January 31, 2000.

dollars through third-party billing.”⁷⁰ The report described cramming as a “nationwide problem,”⁷¹ and went on to explain how telephone companies, in addition to third-party vendors, benefit from cramming:

*Telephone companies profit from cramming. Over the past decade, telephone companies have generated over \$1 billion dollars in revenue by placing third-party charges on their customers’ telephone bills. Since 2006, AT&T, Qwest, and Verizon have earned more than \$650 million through third-party billing. Verizon explained that it—receives a flat fee between \$1 and \$2 per charge for placing third-party charges on its customers’ bills. Because telephone companies generate revenue by placing third-party charges on their customers’ bills, telephone companies profit from cramming. Documents reviewed by the Committee staff show that some telephone company employees feel financial pressure to approve third-party vendors even though the companies appear to be crammers.*⁷²

- In July 2012, the FTC reported that cramming is also an issue for wireless phone customers, noting that in recent years “the FTC and FCC have reviewed thousands of complaints about unauthorized third-party charges on wireless bills. The number of reported complaints undoubtedly understates the full extent of wireless **cramming** by a substantial amount.”⁷³ [emphasis added]
- In August 2012, *Consumer Reports Magazine* published an article titled “Beware of bogus phone-bill fees” which reported that “[t]he FCC estimates that 15 to 20 million landline customers are **crammed** each year” and advised “[d]on’t rely on your telecom provider to weed out the [unauthorized] charges.”⁷⁴ [emphasis added]
- An FTC Report published in July 2014 discussed various enforcement actions the Commission had taken. While the report focused on mobile cramming, it also noted that the FTC “ha[d] brought over thirty cases to stop landline **cramming** and return money to customers.”⁷⁵ [emphasis added]

⁷⁰ “Unauthorized Charges on Telephone Bills, Staff Report for Chairman Rockefeller,” *The Committee on Commerce, Science, and Transportation*, July 12, 2011, p. i (cited in Complaint, ¶ 45.)

⁷¹ “Unauthorized Charges on Telephone Bills, Staff Report for Chairman Rockefeller,” *The Committee on Commerce, Science, and Transportation*, July 12, 2011, p. i (cited in Complaint, ¶ 45.)

⁷² “Unauthorized Charges on Telephone Bills, Staff Report for Chairman Rockefeller,” *The Committee on Commerce, Science, and Transportation*, July 12, 2011, p. iii (emphasis original, cited in Complaint, ¶ 45.)

⁷³ “FTC Calls Wireless Phone Bill Cramming a Significant Consumer Problem,” *The Federal Trade Commission (FTC)*, July 23, 2012.

⁷⁴ “Beware of bogus phone-bill fees,” *Consumer Reports Magazine*, August 2012.

⁷⁵ “Mobile Cramming, an FTC Staff Report,” *FTC*, July 2014, p. 7.

- Also in July 2014, another Senate hearing about cramming on wireless phone bills described the practice as “widespread” and having “caused consumers substantial harm.”⁷⁶
- Over the course of 2014 and 2015, the federal government made cramming settlements with all four major U.S. wireless carriers. In October 2014, AT&T settled for \$105 million, in December 2014, T-Mobile settled for \$90 million, and in May 2015, Verizon and Sprint settled for \$90 million and \$68 million, respectively.⁷⁷

2. *Cramming Allegations and Enforcement Actions Against CenturyLink Have Also Been Well-Publicized for Years*

57. While there has been broadly disseminated news about cramming in the telecommunications industry as a whole over the past 20 years, there have also been well-publicized reports and allegations of cramming *specific to CenturyLink* prior to the beginning of the proposed Class Period and for years before the alleged curative disclosures in this Action. Examples of such disclosures include the following:

- In 2012, U.S. Senator Amy Klobuchar attempted to pass legislation to fight cramming at Verizon, AT&T, and CenturyLink.⁷⁸
- In October 2013, news outlets reported that SCS Communication Systems filed a complaint against CenturyLink, “alleging that CenturyLink has failed to disconnect three accounts and continues to bill the company.” The company specifically charged CenturyLink with violating local anti-cramming and slamming statutes.⁷⁹
- In March 2014, public media reported a \$2.3 million CenturyLink settlement over cramming allegations in Florida.⁸⁰

⁷⁶ “Cramming on Wireless Phone Bills: A Review of Consumer Protection Practices and Gaps; Hearing before the Committee on Science and Transportation United States Senate One Hundred Thirteenth Congress,” *US Government Publishing Office*, Second Session, July 30, 2014, p. 10.

⁷⁷ “Verizon and Sprint to pay \$158 million for cramming charges on customers’ bills,” *The Verge*, May 12, 2015; Complaint, ¶ 51.

⁷⁸ “Klobuchar cosponsors legislation to crack down on phone cramming - bill would ban most third-party charges on landline phones; last year, Klobuchar successfully pressed Verizon, AT&T, and CenturyLink to stop placing deceptive third-party charges on landline phone bills,” *Congressional Documents and Publications*, June 12, 2013.

⁷⁹ “PRC directs CenturyLink to respond to complaint,” *TR’s State NewsWire*, October 24, 2013.

⁸⁰ “Fishy phone charges? You can seek refund State urges ‘cramming’ victims to reply to notices,” *The Orlando Sentinel*, March 28, 2014.

- Later in 2014, CenturyLink’s settlement with the Washington Utilities and Transportation Commission was publicized.⁸¹
- In September 2015, the SEC raised public concern about CenturyLink’s financial reporting, and specifically questioned the company’s transparency on revenue streams.⁸²
- In October 2016, the Seattle Office of Cable Communications investigated CenturyLink after a rise in billing complaints beginning in 2013.⁸³
- In January 2017, a pattern of billing complaints against CenturyLink in Denver, Colorado, also made headlines on Fox News.⁸⁴
- In February 2017, a resident in Portland, Oregon reported billing complaints, fueling media reports of vast consumer complaints against CenturyLink across the state.⁸⁵
- In April 2017, the State of Iowa Department of Commerce Utilities Board filed a report alleging CenturyLink cramming practices.⁸⁶

58. These examples provide an economic framework within which to consider the allegations in this Action. Complaints about cramming and related issues have been around in the telecommunications industry for decades. Because concern about such matters was already well-known, the allegations themselves do not, on their face, constitute new information, and as such would not be expected to dissipate meaningful price inflation if such price inflation were in CenturyLink’s securities price at that time, as is expected with a corrective disclosure. Dr. Hartzmark has done nothing to show that the alleged curative disclosures were, in fact, materially different than the long history of concerns about cramming in the industry. The

⁸¹ “CenturyLink to pay \$30K to settle billing complaint,” *TR’s State NewsWire*, August 4, 2014; “CenturyLink settles with UTC staff over billing complaint,” *TR’s State NewsWire*, July 8, 2014.

⁸² The Securities Exchange Commission (SEC), September 8, 2015 (cited in Complaint, ¶ 123).

⁸³ “CenturyLink held accountable for billing, service issues,” *KING5 News*, October 6, 2016 (cited in Complaint, ¶ 242).

⁸⁴ “Denver Better Business Bureau issues warning about CenturyLink,” *Fox News Denver*, January 27, 2017 (cited in Complaint, ¶ 245).

⁸⁵ “Growing pains: CenturyLink consumer complaints spike as service expands,” *KGW8*, February 1, 2017.

⁸⁶ Iowa Communications Alliance Reply Comments *In Re: Deregulation of Local Exchange Services*, Docket No. INU-2016-0001, April 21, 2017.

alleged curative disclosures are not findings or resolutions of allegations, but simply more lawsuits and investigations, occurring in an environment of FUD associated with the recent Wells Fargo-type concerns.

B. There Was Little Positive Price Reaction to Alleged Misstatements and Little Correlation Between Earnings and Revenue Surprises and Price Reaction

59. Also implicit in the assumption of the accuracy of the allegations in the Complaint is an assumption that the alleged inflationary dates actually *created inflation* and that the inflation was reasonably linked to the Complaint’s allegations. Dr. Hartzmark has conducted no analysis of the plausibility or measure of inflation associated with any alleged inflationary statements. From an economic perspective, even if one is not doing a complete loss causation analysis, it is important to at least consider and analyze the economic framework when offering opinions relevant to the common measurement of economic damages.

60. In this section, I discuss the “front-end” alleged inflationary statements. The Complaint identifies several alleged misleading statements made by the Defendants on 38 “market” dates during the Class Period that relate to revenue. **Exhibit 18A** lists 38 dates on which the Complaint alleges revenue-related misstatements.⁸⁷ **Exhibit 18B** lists an additional 18 dates on which the Complaint alleges other misstatements.⁸⁸ The revenue-related statements are frequently about CenturyLink’s Consumer segment revenue, at times more narrowly focusing on Consumer Strategic revenue. Several attributes of these statements are notable. The alleged inflationary statements were made in a variety of settings, including earnings releases, earnings

⁸⁷ Complaint, Appendix A.

⁸⁸ These alleged misstatements are listed in various parts of the Complaint. I have noted each non-revenue misstatement and its location in the Complaint in **Exhibit 18C**.

calls, 8-K, 10-K and 10-Q filings, and at four separate investor conferences. These are “information-rich” events in which investors learn an array of new information. For instance, on a quarterly earnings announcement date, a company may release information about key financial and non-financial metrics, reveal capital expenditure and asset-related information, discuss dividends and/or buybacks, and a wide range of additional information. The information generally comes out (1) in a press release of results; (2) by a conference call with analysts and investors where the company discusses the quarterly results, explains nuances in the results, and answers analyst and investor questions; and (3) in the company’s SEC filings (10-Qs for each fiscal quarter and 10-Ks for each fiscal year). For example, in the case of CenturyLink during the Class Period, its 2Q earnings releases each year from 2013–2017 contained nearly 20 to over 35 metrics, and its 4Q/FY earnings releases from 2013–2016 contained nearly 35 to over 40 metrics. This is in addition to commentary around these numbers and other topics. (See **Exhibit 6** and **Exhibits 7A - 17A**.) In summary, on information-rich days such as these, there are large amounts of complex information disclosed. Dr. Hartzmark has not conducted any analysis to even plausibly parse the effect of the alleged misrepresentations or categories of misrepresentations from non-false information, which would be necessary to connect any statements to a common measure of damages or price inflation, nor has he outlined a methodology for doing so.

61. It is in this information-rich environment that the Complaint alleges that general statements such as the following were significant enough to have altered a reasonable investor’s expectation of future cash flows:⁸⁹

⁸⁹ Complaint, Appendix A, pp. 1–5.

- The Consumer segment realized continued strategic revenue growth driven by increased high-speed Internet and CenturyLink® Prism™ TV subscribers. Source: Q1 2013 Form 8-K (May 8, 2013).
- The Consumer segment realized continued strategic revenue growth driven by year-over-year increased high-speed Internet and CenturyLink® Prism™ TV subscribers. Source: Q2 2013 Form 8-K (August 7, 2013).
- The Consumer segment realized continued strategic revenue growth driven by increased high-speed Internet and CenturyLink® Prism™ TV subscribers, along with price increases for selected services. Source: Q3 2013 Form 8-K (November 6, 2013).
- The Consumer segment achieved strong strategic revenue growth driven by increased high-speed Internet and CenturyLink® Prism™ TV subscribers, along with price increases on certain products and lower customer churn. Source: Q1 2014 Form 8-K (May 7, 2014).
- The Consumer segment achieved year-over-year revenue growth driven by increased high-speed Internet and CenturyLink Prism TV customers and price increases on certain products. Source: Q2 2014 Form 8-K (August 6, 2014).

62. As these examples from the Complaint illustrate, these alleged misstatements were general and typically *did not* convey new or obviously inaccurate information to investors. Indeed, they often repeated boilerplate, commonplace messages. As noted earlier, the overall challenges in the industry were such that no informed investor would reasonably review the actual data and conclude that CenturyLink was, for example, a company with strong organic

revenue growth. There is nothing to suggest that these statements were largely positive (and thus inflationary) surprises, or that these general revenue statements would have stood out amongst the range of information being released on the same day and altered investors' beliefs about the value of CenturyLink's securities.

63. In addition to the specific revenue misstatements that the Complaint notes in Appendix A, there are an additional 18 alleged misstatements that are listed in various parts of the Complaint. I have listed each such alleged misstatement in **Exhibit 18C**. To distinguish this set from the set of alleged misstatements noted in Complaint Appendix A, I refer to these alleged misstatements collectively as the alleged "non-revenue misstatements."

64. Similar to the alleged revenue misstatements, the non-revenue misstatements typically *did not* convey new or obviously inaccurate information to investors. For instance, the alleged misstatement on five of the 18 dates is the following sentence regarding bundling strategy that was included in five Proxy statements released on different dates, among other SEC filings:

- "Helped mitigate legacy service declines: As part of its effort to 'mitigate' declines in its legacy services, the Company remained 'focused on efforts to ... promote long-term relationships with our customers through bundling of integrated services.'"⁹⁰

65. As another example, the Complaint also notes the following as a false statement from CenturyLink's former CFO Stewart Ewing:

⁹⁰ Complaint, ¶ 205, note 9.

- “... during investor conference calls on March 9, 2015, June 4, 2015 and March 7, 2016, Defendant Ewing stated ‘[w]e’re committed to being the broadband leader in our markets, offering advanced broadband services that meet the needs of our customers.’”⁹¹

66. As I have noted earlier, no reasonable investor would view these general, boilerplate statements as altering the rich mix of information publicly available to CenturyLink investors from numerous sources. It is unlikely that statements such as these and others noted in **Exhibit 18C** were considered by investors as large positive surprises which would introduce artificial inflation into the price, even if the allegations regarding the falsity of such statements were true.

1. Economic Evaluation of 52 Alleged Inflationary Statement Days

67. To illustrate both the need for economic evaluation and the complexity of conducting such an analysis, I evaluated CenturyLink’s stock price reaction to the alleged inflationary misstatements and present those results in **Exhibits 18A** and **18B**. Some of the alleged revenue misstatements were made after 4 PM ET, which is the close of trading for CenturyLink’s stock. Therefore, their potential impact on CenturyLink’s securities prices would be felt on the following trading day. If a separate misstatement was alleged on that following trading day (before 4:00 PM), any price impact(s) for the two consecutive-day disclosures would be felt on the same day. As such, I find that the 38 alleged revenue misstatements could have potentially affected CenturyLink’s stock price on 35 distinct trading (or “market”) days. **Exhibit 18B** lists an additional 18 dates on which the Complaint alleges other misstatements. Since one

⁹¹ Complaint, ¶ 197.

of the 18 dates overlaps with the 35 dates identified for assessing alleged revenue misstatement impact, the total number of days on which I assess CenturyLink's stock price reaction to the alleged inflationary misstatements is 52 ("Abnormal Return Measurement Dates".) For each date, I evaluated whether the abnormal return on CenturyLink's stock, after eliminating the impact of industry and market wide factors,⁹² is positive and statistically significant, negative and statistically significant, or not statistically significantly different from zero.

68. In the figure below (also shown as **Exhibit 18D**), I list each of the 52 Abnormal Return Measurement Dates, abnormal returns on that date, and provide an example of mapping to the Plaintiffs' categories of misstatements.⁹³ As discussed, Dr. Hartzmark has not identified how the combination of the 52 alleged inflation days and the five categories of misrepresentations would be used to develop estimates of inflation under various combinations of findings. It is clear from reviewing this figure just how complex any exercise of inflation estimation would be. As an example of the complexity, each of the five categories of alleged misrepresentations implicates between 1 and 14 of the 52 different possible dates, and most dates have multiple categories of misrepresentation, which will require further within-day scaling and parsing of any inflation estimates.

⁹² For these calculations, I use the Deal Model for my event study, which I discuss later in my report.

⁹³ The mapping shown in the figure is simply an example. Neither the Complaint nor Dr. Hartzmark's report even attempt such a mapping.

Figure 5
Overview of the 52 Alleged Inflationary Dates
(Statistically Significant Positive and Negative Abnormal Price Changes are Bolded)

Mapping to Categories of Alleged Misstatements										
Announcement Date	Abnormal Return Measurement Date	Revenue Misrepresentation in Complaint Appendix A	(1) "Customer First" Strategy, Customer Needs, Bundling	(2) Reasons and Factors Driving the Company's Financial Performance	(3) Reasons Behind Fluctuating Financial Results	(4) Business Conduct and Sales Practices	(5) Material Omissions Under Item 303 (Mgmt. Discussion of Financial Results)	Announcement Type	Abnormal Return	t-Statistic
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]
[1]	1-Mar-2013	1-Mar-2013						10-K	1.1%	0.51
[2]	10-Apr-2013	10-Apr-2013						SEC Form DEF 14A	(0.9%)	(0.41)
[3]	8-May-2013	9-May-2013						Earnings Announcement	0.9%	0.44
[4]	10-May-2013	10-May-2013						10-Q	0.0%	0.01
[5]	7-Aug-2013	8-Aug-2013						Earnings Announcement	(5.8%)	(7.09)
[6]	8-Aug-2013	9-Aug-2013						10-Q	(1.1%)	(1.20)
[7]	6-Nov-2013	7-Nov-2013						Earnings Announcement	(4.7%)	(4.66)
[8]	7-Nov-2013*	8-Nov-2013						10-Q	(2.3%)	(2.11)
[9]	10-Dec-2013	10-Dec-2013						Investor Conference	0.7%	0.63
[10]	12-Feb-2014	13-Feb-2014						Earnings Announcement	1.0%	1.02
[11]	27-Feb-2014	27-Feb-2014						10-K	0.1%	0.07
[12]	16-Apr-2014	16-Apr-2014						SEC Form DEF 14A	1.2%	1.21
[13]	7-May-2014	8-May-2014						Earnings Announcement	6.3%	7.86
[14]	8-May-2014*	9-May-2014						10-Q	(1.2%)	(1.19)
[15]	12-Jun-2014	12-Jun-2014						Investor Conference	0.2%	0.16
[16]	6-Aug-2014	7-Aug-2014						Earnings Announcement	0.6%	0.59
	7-Aug-2014	7-Aug-2014						10-Q	-	-
[17]	5-Nov-2014	6-Nov-2014						Earnings Announcement	(5.8%)	(6.45)
[18]	6-Nov-2014	7-Nov-2014						10-Q	0.4%	0.34
[19]	11-Feb-2015	12-Feb-2015						Earnings Announcement	(3.7%)	(3.47)
[20]	24-Feb-2015	25-Feb-2015						10-K	(0.4%)	(0.29)
[21]	9-Mar-2015	9-Mar-2015						Investor Conference	(0.7%)	(0.59)
[22]	8-Apr-2015	8-Apr-2015						SEC Form DEF 14A	0.7%	0.57
[23]	5-May-2015	6-May-2015						Earnings Announcement	(1.7%)	(1.46)
[24]	6-May-2015	7-May-2015						10-Q	1.0%	0.85
[25]	4-Jun-2015	4-Jun-2015						Investor Conference	0.3%	0.30
[26]	24-Jun-2015	24-Jun-2015						Financial Analyst Day	(1.3%)	(1.11)
[27]	5-Aug-2015	6-Aug-2015						Earnings Announcement	(1.7%)	(1.43)
	6-Aug-2015	6-Aug-2015						10-Q	-	-
[28]	12-Aug-2015	12-Aug-2015						Oppenheimer Conference	1.5%	1.29
[29]	22-Sep-2015	22-Sep-2015						Response Letter to the SEC	(0.3%)	(0.28)
[30]	4-Nov-2015	5-Nov-2015						Earnings Announcement	3.1%	2.73
[31]	5-Nov-2015	6-Nov-2015						10-Q	(0.4%)	(0.36)
[32]	7-Dec-2015	7-Dec-2015						Investor Conference	2.4%	1.98
[33]	10-Feb-2016	11-Feb-2016						Earnings Announcement	10.7%	8.44
[34]	24-Feb-2016*	25-Feb-2016						10-K	0.6%	0.36
[35]	7-Mar-2016	7-Mar-2016						Investor Conference	(0.3%)	(0.19)
[36]	5-Apr-2016	6-Apr-2016						SEC Form DEF 14A	0.7%	0.43
[37]	6-Apr-2016	7-Apr-2016						AZ Assurance of Discontinuance	(0.8%)	(0.47)
[38]	4-May-2016	5-May-2016						Earnings Announcement	(6.8%)	(4.21)
	5-May-2016	5-May-2016						10-Q	-	-
[39]	3-Aug-2016	4-Aug-2016						Earnings Announcement	(0.8%)	(0.59)
[40]	4-Aug-2016	5-Aug-2016						10-Q	(1.1%)	(0.83)
[41]	21-Sep-2016	21-Sep-2016						Goldman Sachs Conference	(0.1%)	(0.07)
[42]	6-Oct-2016	6-Oct-2016						Statement to News Source	0.3%	0.25
[43]	18-Oct-2016	18-Oct-2016						Statement to News Source	1.4%	1.13
[44]	31-Oct-2016	31-Oct-2016						Earnings Announcement	(12.7%)	(9.82)
[45]	4-Nov-2016	4-Nov-2016						10-Q	(0.4%)	(0.21)
[46]	27-Jan-2017	30-Jan-2017						Statement to News Source	0.2%	0.10
[47]	1-Feb-2017	2-Feb-2017						Statement to News Source	(0.1%)	(0.04)
[48]	8-Feb-2017	9-Feb-2017						Earnings Announcement	(0.6%)	(0.30)
[49]	22-Feb-2017*	23-Feb-2017						10-K	0.6%	0.31
[50]	13-Apr-2017	13-Apr-2017						SEC Form DEF 14A	1.0%	0.55
[51]	3-May-2017	4-May-2017						Earnings Call	(5.2%)	(5.37)
[52]	25-May-2017	25-May-2017						Statement to News Source	(0.6%)	(0.53)
Total			38	14	10	3	6	1		

69. As another example of the complexity of this exercise, one can consider how certain information on the subset of earnings announcement dates among the 52 alleged inflation dates compared to investor expectations. From a financial perspective, market participants

typically compare the actual and forecasted values of the metrics that are announced that day by the company against their expectations. For example, extensive prior academic research has shown that, on average, the market reaction on earnings announcement days is consistent with the “earnings surprise.”⁹⁴ For the dates that are associated with earnings releases, I review the earnings per share (EPS) and revenue “surprises,” as shown in **Exhibit 18E**. I summarize and discuss the findings of abnormal returns and earnings surprises below.

70. Seventeen of the 52 alleged inflationary dates are also earnings announcement dates. Seven of these 17 allegedly inflationary earnings announcement dates had *negative* abnormal returns; in other words, on seven days on which the Company allegedly made inflationary statements, the stock price actually *fell* (after controlling for market and industry effects). Furthermore, two of these seven allegedly inflationary earnings announcement dates with statistically significant negative abnormal returns also featured negative earnings surprises (*i.e.*, earnings were below the consensus analyst forecast), while the other five had positive or zero earnings surprises (*i.e.*, earnings were above or at the consensus analyst forecast). On three of these 17 allegedly inflationary earnings release dates, abnormal returns were significantly positive and so was the earnings surprise. Dr. Hartzmark has offered no methodology to disentangle the positive impact of the surprise from the positive impact of the alleged misstatement, if any. On the remaining seven of the 17 allegedly inflationary earnings release dates, abnormal returns were not statistically significantly different from zero even though the earnings surprise on some of these days was substantial. So for each of these allegedly inflationary earnings release dates, Plaintiffs need to be able to disentangle any price impacts of

⁹⁴ See Jones, Charles P., “Investments: Analysis and Management,” *Wiley*, 2012 (12th Edition), pp. 405–08. Earnings surprise is the difference between actual earnings and the market’s expectation of those earnings, where analysts’ consensus earnings forecasts typically proxy for the market’s expectation of earnings.

allegedly inflationary misrepresentations from various combinations of countervailing/counterintuitive *negative/nonexistent* abnormal returns and countervailing or amplifying earnings surprises, but Dr. Hartzmark has offered no methodology for doing so. It is unclear how, if at all, Plaintiffs would be able to use this information to accurately construct a series of inflation ribbons that would logically correspond to their alleged misstatements, including needed parsing and scaling.

71. With respect to revenues (of which Plaintiffs' allegations appear to focus on a small subset of, *i.e.*, Consumer Strategic revenue), six of the 17 allegedly inflationary earnings releases during the Class Period had *negative* revenue surprises. That is, the actual revenue announced that day was lower than what the market was expecting. Of these, *three had statistically significant negative abnormal returns* and three were not statistically significantly different from zero. Eleven of the 17 allegedly inflationary earnings releases had positive revenue surprises; of these, *only three had statistically significant positive abnormal returns*, while *four had statistically significant negative abnormal returns* and four had no statistically significant abnormal returns.

2. Disclosure Dates with Statistically Significant Positive Abnormal Returns

72. Among all 52 days on which the alleged misrepresentations potentially could have impacted CenturyLink's stock price, *only four* have statistically significant positive abnormal returns. Three out of four of these positive abnormal return dates corresponded to earnings releases on which the EPS and revenue surprises were positive (May 8, 2014; November 15, 2015; and February 11, 2016). The only other positive, statistically significant abnormal return during the Class Period (December 7, 2015) was a day on which the allegedly inflationary

misrepresentations were made at a conference, as described below. Given that these information-rich days included a number of positive disclosures, it is likely impossible to reliably isolate the effects of the allegedly inflationary misrepresentations from other “confounding” good news on those days, and Dr. Hartzmark has certainly not put forward a model capable of doing so, or even discussed such a model. The complexity and challenge can be illustrated by doing even a preliminary review of each of these four dates.

73. The first statistically significant price increase was on **May 8, 2014** following the release of CenturyLink’s Q1 2014 10-Q. CenturyLink reported large additions of both Prism TV and broadband high-speed internet subscribers. Plaintiffs provide no evidence that these increases were driven, partially or wholly, if at all, by CenturyLink’s misleading sales practices. In addition, there were other positive factors reported that could also have driven the price increase. For instance, CenturyLink’s stock buyback had progressed at a rapid rate. Analysts at Macquarie stated that, “we believe that CTL, as the most liquid wireline stock, will benefit from a scarcity premium on the emerging high-bandwidth theme.”⁹⁵

74. The second statistically significant price increase was on **November 5, 2015**, when CenturyLink’s Q3 10-Q was released. This filing included a number of positive disclosures that analysts and the market would likely have viewed favorably. Free cash flows were strong, beating some analyst estimates by more than \$100 million.⁹⁶ Management was on track to reduce operating expenses by \$125 million for the year, and aggressive stock buybacks were exceeding

⁹⁵ “CenturyLink Riding high-bandwidth wave; maintain OP and raise estimates and TP to \$39,” *Macquarie*, May 8, 2014, p. 1.

⁹⁶ “CTL: Solid Q3 Results, Exploring Options For Data Center,” *Wells Fargo*, November 5, 2015, p. 1.

analyst expectations.⁹⁷ CenturyLink’s biggest news, however, was that they had “retained financial advisors to assist in the exploration of strategic alternatives for our data centers and colocation business operations.”⁹⁸ These strategic alternatives included the potential sale of the data centers, which analysts at Wells Fargo, Morgan Stanley, and Macquarie all viewed very favorably.⁹⁹ It is challenging to believe that the revenue-related allegedly misleading disclosures made by CenturyLink on this date would have registered with investors or have had any impact on CenturyLink’s stock price in the midst of such significant positive news.

75. The third statistically significant price increase was on **December 7, 2015**, the day UBS Research held a Communications Conference at which CenturyLink’s CFO Stewart Ewing discussed CenturyLink’s continued business strategy. UBS’s Batya Levi questioned Ewing on several topics including data center and co-location sales, headwinds facing the high-bandwidth strategic segment, concerns about wholesale-side revenue losses, and continued sales slowdown from salesforce re-alignment. After the conference, Ms. Levi released an analyst report highlighting several topics discussed. She noted “continued progress on sales force trends;” anticipated “stabilizing top line trends” attributable to a combination of acceleration in high bandwidth service to business customers; GPON [Gigabit Passive Optical Networks] and CAFII [Connect America Fund II, an FCC program designed to expand access to voice and broadband services for areas where they are unavailable] investments to facilitate broadband on the

⁹⁷ “CenturyLink, Inc. 3Q15 Review: Results Light, Data Center Monetization in Focus,” *Morgan Stanley*, November 5, 2015, p. 1.

⁹⁸ CenturyLink 10-Q (2015 3Q), p. 43.

⁹⁹ “CenturyLink Several N_T catalysts; Board appears to finally be open to unlocking value,” *Macquarie*, November 8, 2015, p. 1.

consumer side; Company hopes for positive broadband net adds, though UBS was still predicting -40,000 on this front; and anticipated favorable tax changes.¹⁰⁰

76. The last date on which I found a statistically significant positive abnormal return was **February 11, 2016**. While it is true CenturyLink's 4Q 2015 earnings release mentioned growth in the consumer segment and additional Prism TV subscribers, the earnings release also mentioned a number of other pieces of information that would likely have had a positive impact on CenturyLink's share price. These include: completion of a \$1 billion share repurchase program, with \$280 million in 4Q 2015, up from \$263 million in 3Q 2015; "increased business customer demand for high-bandwidth data services;" and "increased high-cost support revenues due to recognition of CAF Phase 2 funds."¹⁰¹ Analysts from investment banks reporting on CenturyLink, including Morgan Stanley, J.P. Morgan, and Jefferies, were all in agreement that CenturyLink's income beat was driven by strategic business revenue.¹⁰² Morgan Stanley analysts, for example, said "the revenue beat relative to MSe was driven by better strategic business revenue (+40m) and legacy consumer revenue (+\$15m)."¹⁰³ A J.P. Morgan report headline read "Consumer revenue weaker as solid business revenue lifted the beat; EBITDA margin higher than anticipated due to cost discipline."¹⁰⁴ In addition to echoing the points in the earnings release, analysts from Bank of America Merrill Lynch, J.P. Morgan, and Jefferies

¹⁰⁰ "CTL: Highlights from UBS Conference," *UBS*, December 7, 2015, p. 1.

¹⁰¹ "CenturyLink, Inc. 4Q15 Review: Results Better Than Feared, Data Center Commentary Positive," *Morgan Stanley*, February 11, 2016, pp. 1, 2.

¹⁰² "CenturyLink, Inc. 4Q15 Review: Results Better Than Feared, Data Center Commentary Positive," *Morgan Stanley*, February 11, 2016, pp. 1, 2; "CenturyLink Strong 4Q15 Numbers and Reassuring 2016 Guide, No Update on Data Center Sale," *J.P. Morgan*, February 11, 2016, p. 1; "CenturyLink Cost Cuts Show Through; Guidance Suggests Little Upside to Estimates," *Jefferies*, February 11, 2016, p. 1.

¹⁰³ "CenturyLink, Inc. 4Q15 Review: Results Better Than Feared, Data Center Commentary Positive," *Morgan Stanley*, February 11, 2016, pp. 1, 2.

¹⁰⁴ "CenturyLink: Strong 4Q15 Numbers and Reassuring 2016 Guide, No Update on Data Center Sale," *J.P. Morgan*, February 11, 2016, p. 1.

mentioned that CenturyLink was expecting to begin negotiations for its data center sale in the coming weeks.¹⁰⁵

3. *Disclosure Dates with Statistically Significant Negative Abnormal Returns*

77. Among all 52 days on which the alleged misrepresentations potentially impacted CenturyLink's stock price, eight have statistically significant *negative* abnormal returns. All eight followed earnings releases; two of them, November 7, 2013 and November 8, 2013, followed the same earnings release. On five of these dates (August 8, 2013; November 7, 2013; November 8, 2013; November 6, 2014; and October 31, 2016) the earnings releases contained *positive* earnings per share and revenue "surprises," which strongly suggests that other factors were driving the change in the abnormal returns. Two dates (February 12, 2015 and May 4, 2017) had *negative* earnings per share and revenue "surprises," and the last date (May 5, 2016) had a *positive and negative* earnings per share and revenue "surprise" respectively. The variation in the relationship between the abnormal returns and the "surprises" demonstrates how important the full picture of the many pieces of information released on any given day is in determining the abnormal returns. Factors which seem very important in one release can be meaningless in another release depending on the other pieces of information which accompany it. Just like the days with positive abnormal returns, given that these information-rich days included a number of both positive and negative disclosures, it is likely impossible to reliably isolate the effects of the allegedly inflationary misrepresentations from other "confounding" good and bad news on those days, and Dr. Hartzmark has certainly not put forward a model capable of doing so.

¹⁰⁵ "CenturyLink: 4Q Wrap: Riding the storm out," Bank of America Merrill Lynch, February 11, 2016, p. 1; "CenturyLink: Strong 4Q15 Numbers and Reassuring 2016 Guide, No Update on Data Center Sale," *J.P. Morgan*, February 11, 2016, p. 1; "CenturyLink: Cost Cuts Show Through; Guidance Suggests Little Upside to Estimates," *Jefferies*, February 11, 2016, p. 1.

78. As another illustration of the complexity that must be considered, I can identify some of the common themes across these different dates that show broader concerns about the company's prospects. On the five dates in this group with positive earnings per share and revenue "surprises" analyst reports tended to focus on the risks of future plans and weaknesses in particularly important parts of the business. For example on August 8, 2013, Macquarie focused on the riskiness of the stock buyback program due to the increase in CenturyLink's leverage.¹⁰⁶ On November 7, 2013, Bank of America Merrill Lynch and J.P. Morgan both focused on the weakness in CenturyLink's data hosting business *in spite of* the more than offsetting strength of the consumer segment.¹⁰⁷ And on October 31, 2016 Macquarie emphasized that, despite the potential upside to the Level 3 acquisition, they saw, "the road to synergies...as a rocky one."¹⁰⁸

4. *Disclosure Dates with No Statistically Significant Abnormal Returns*

79. Among all 52 days on which the alleged misrepresentations potentially impacted CenturyLink's stock price, 40 had no statistically significant abnormal returns. Similar mixes of information as discussed above were released on many of these 40 days, including positive and negative earnings per share and revenue surprises, but there was no detectible impact on the abnormal returns. This shows again that it is likely impossible to reliably isolate the effects of the allegedly inflationary misrepresentations from other "confounding" good and bad news on these days, and Dr. Hartzmark has not put forward a model capable of doing so.

¹⁰⁶ "CenturyLink 'Narrowed' guidance likely to pressure shares; leveraging up for buyback looks risky long term," *Macquarie*, August 8, 2013, p. 1.

¹⁰⁷ "CenturyLink 3Q Wrap: Consumer and Business outperforming," *Bank of America Merrill Lynch*, November 7, 2013, p. 1; "CenturyLink Strong Broadband Rebound Mired by Data Hosting Write Down Tempers Flat Revenue Expectations," *J.P. Morgan*, November 7, 2013, p. 1.

¹⁰⁸ "CenturyLink Double, Double Toil And..." *Macquarie*, October 31, 2016, p. 1.

80. Overall, the analyses above highlight the complexity of these 52 frequently information-rich dates and the overly simplistic—and incorrect—premise that merely assuming everything in the Complaint will be shown to be true will somehow result in a damages measurement approach that will be common to all class members.

C. There is No Evidence That the Alleged Sales Practices Had a Material Impact on Revenue

81. Another implicit assumption is that allegations of cramming, even if true and even if unexpected (both huge assumptions), would have a material impact on revenue. Again, Dr. Hartzmark has done no analysis to show the plausibility of this assumption or to estimate how this would relate to a determination of inflation for purposes of developing a common method.

82. In the previous section, I included my analysis of revenue “surprises” relative to expectations. In this section, I discuss other aspects of the allegations regarding revenue. With regards to revenue, Plaintiffs allege that:

*Defendants’ materially false and misleading statements misrepresented the true reasons behind the growth and fluctuations in the Company’s reported revenues, the Company’s prospects for future revenue growth, and its financial performance. When those statements were corrected and the risks concealed by them materialized ... investors suffered losses as the price of CenturyLink securities declined.*¹⁰⁹

83. The Complaint lists the alleged revenue-related misstatements in Appendix A. These alleged misstatements largely focus on Consumer Strategic revenue. As explained below, this was a relatively small part of CenturyLink’s business and the timing of the revenue changes Plaintiffs point to as evidence of cramming-driven revenue do not line up with the facts of the

¹⁰⁹ Complaint, ¶ 265.

case. Again, even if a complete loss causation analysis is not required at this stage, it is insufficient from an economic perspective to simply assume with no review and consideration as to the plausibility of the allegation or the impact on common methods of measurement that the Plaintiffs are 100 percent correct on all the allegations and their presumed consequences.

1. CenturyLink's Operating Segments and Products and Services

84. CenturyLink experienced substantial growth in annual revenues during the years 2011 and 2012, due to the acquisitions of Qwest on April 1, 2011, and Savvis on July 15, 2011.¹¹⁰ The 2011 acquisitions resulted in a variety of important changes to CenturyLink's operations. One of these changes was providing service to a greater number of densely-populated markets. This is significant because higher population density tends to mean a wider range of choices available to consumers, and therefore more intense competition for the company.¹¹¹ Thereafter, CenturyLink reorganized its business and financial reporting segments several times, but experienced roughly flat to moderately declining operating revenues, with quarterly operating revenues declining roughly 10 percent over the Class Period. (See **Exhibit 3** and **Exhibits 4A - 4C.**)

85. Not surprisingly, given the economic challenges of the telecommunications business, CenturyLink underwent a series of reorganizations and changes in reporting during the past decade. For example, from its acquisitions of Qwest and Savvis in 2011 to January 3, 2013 (approximately two years), CenturyLink reorganized its business three times. In the last of these three reorganizations, just a few months prior to the beginning of the Class Period, the Company

¹¹⁰ CenturyLink 10-K (2012), p. 52.

¹¹¹ CenturyLink 10-K (2012), p. 4.

announced that, going forward, its consolidated financial statements would contain results for four operating segments: Consumer, Business, Wholesale, and Data Hosting.¹¹²

- “*Consumer*. Consists generally of providing strategic and legacy products and services to residential consumers. Our strategic products and services offered to these customers include our broadband, wireless and video services, including our Prism TV services. Our legacy services offered to these customers include local and long-distance service;
- *Business*. Consists generally of providing strategic and legacy products and services to commercial, enterprise, global and governmental customers. Our strategic products and services offered to these customers include our private line, broadband, Ethernet, MPLS, Voice over Internet Protocol (“VoIP”), and network management services. Our legacy services offered to these customers include local and long-distance service;
- *Wholesale*. Consists generally of providing strategic and legacy products and services to other communications providers. Our strategic products and services offered to these customers are mainly private line (including special access), dedicated internet access, digital subscriber line (“DSL”) and MPLS. Our legacy services offered to these customers include the resale of our services, the sale of unbundled network elements (“UNEs”) which allow our wholesale customers to use our network or a combination of our network and their own networks to provide voice and data services to their customers, long-distance and switched access services and other services, including billing and collection, pole rental, floor space and database services; and
- *Data Hosting*. Consists primarily of providing colocation, managed hosting and cloud hosting services to commercial, enterprise, global and governmental customers.”¹¹³

86. Effective November 1, 2014, the Company changed its organizational structure once again and began reporting results for only two operating segments: Business and Consumer.¹¹⁴

- “*Business*. Consists generally of providing strategic, legacy and data integration products and services to enterprise, wholesale and governmental customers, including other communication providers. Our strategic products and services offered to these customers include our private line (including special access), broadband, Ethernet, MPLS, Voice over Internet Protocol (“VoIP”), network

¹¹² CenturyLink 10-K (2012), pp. 6–7.

¹¹³ CenturyLink 10-K (2013), pp. 5–6

¹¹⁴ CenturyLink 10-K (2014), p. 4.

management services, colocation, managed hosting and cloud hosting services. Our legacy services offered to these customers primarily include switched access, long-distance, and local services, including the sale of unbundled network elements (“UNEs”) which allow our wholesale customers to use our network or a combination of our network and their own networks to provide voice and data services to their customers; and

- *Consumer*. Consists generally of providing strategic and legacy products and services to residential customers. Our strategic products and services offered to these customers include our broadband, wireless and video services, including our Prism TV services. Our legacy services offered to these customers include local and long-distance service.”¹¹⁵

87. In January 2017, the Business segment was renamed the Enterprise segment and the Company “reassigned [its] information technology, managed hosting, cloud hosting and hosting area network services from [its] business segment to a new non-reportable operating segment.”¹¹⁶

88. Through all but the last of these operating segment reorganizations, CenturyLink also categorized its product and service offering using a second framework: Strategic and Legacy.¹¹⁷ In other words, reporting could either be done at the business segment level, the strategic/legacy level, or a combination of both.

- “We primarily focus our marketing and sales efforts on our ‘**strategic**’ services, which are those services for which demand remains strong and that we believe are most important to our future performance. Generally speaking, our strategic services enable our customers to access the Internet, connect to private networks and transmit and store data, and enhance the security, reliability and efficiency of our customers’ communications and data storage. Our strategic services are comprised of the following: Broadband ... Private Line ... MPLS. Multi-Protocol Label Switching [a data technology supporting live voice and video that enables network operators to reroute traffic] ... Managed Hosting ... Colocation ...

¹¹⁵ CenturyLink 10-K (2014), pp. 4–5.

¹¹⁶ CenturyLink 10-K (2017), p. 6.

¹¹⁷ See CenturyLink 10-K (2013), pp. 6–8; CenturyLink 10-K (2014), pp. 5–6; CenturyLink 10-K (2015), pp. 5–7; CenturyLink 10-K (2016), pp. 7–8.

Ethernet ... Video [Prism TV and DIRECTV]... VoIP ... and Managed Services [network, hosting, cloud, and IT services].”¹¹⁸

- “Our **‘legacy’** services represent our traditional voice, data and network services, which include the following: Local Voice Service ... Long-distance Voice Service ... integrated services digital network (‘ISDN’) services, which uses regular telephone lines to support voice, video and data applications ... wide area network (‘WAN’) services ... and ... various forms of switched access services to wireline and wireless service providers for the use of our facilities to originate and terminate their interstate and intrastate voice transmissions.”¹¹⁹

89. As with the business segments, CenturyLink reclassified certain revenue streams from Strategic to Legacy services, and vice versa, multiple times during the Class Period. For example, in 2013, CenturyLink reclassified operating revenues attributable to certain bundled services from Legacy to Strategic services.¹²⁰ Similarly, operating revenues attributable to certain Competitive Local Exchange Carrier (CLEC) services were moved from Strategic to Legacy services.¹²¹

90. In addition, during the first quarter of 2015, CenturyLink reclassified revenue from certain products and services associated with its acquisition of Savvis from Strategic to Legacy services.¹²² Finally, during the second quarter of 2016, CenturyLink moved revenue from certain business low-bandwidth data services, including its private line services, from Strategic to Legacy services.¹²³

91. Understanding the number and timing of reorganizations and changes in reporting and the multiple dimensions on which reporting was done is important in assessing how, if at all,

¹¹⁸ CenturyLink 10-K (2014), pp. 5–6.

¹¹⁹ CenturyLink 10-K (2014), pp. 5–6.

¹²⁰ CenturyLink 10-K (2013), p. 44.

¹²¹ CenturyLink 10-K (2013), p. 45.

¹²² CenturyLink 10-K (2015), p. 45.

¹²³ CenturyLink 10-K (2016), p. 123.

the allegations in this Action would manifest themselves in CenturyLink's financial reporting, how any such manifestations would affect revenue trends over time as tracked and interpreted by investors, and the degree to which any alleged revenue reporting would be noticed or change investor expectations. While Dr. Hartzmark has provided no such analysis, I discuss some relevant high-level trends and their implications below to illustrate the challenges in developing a common damages calculation approach.

2. *Trends in Strategic Consumer Segment Revenue*

92. Throughout the Class Period, Consumer segment revenues remained relatively flat and accounted for roughly one third of CenturyLink's total revenues. (See **Exhibit 4C**.) Throughout the Class Period, Strategic services revenue accounted for between approximately 45 to 55 percent of CenturyLink's total revenues; and shifting allocations of revenue between these two product service categories over the Class Period make reliable characterization of trends along these lines difficult.¹²⁴ (See **Exhibit 4A**.) Again, Dr. Hartzmark has provided no analysis of how investors would evaluate the alleged inflationary statements, how they would translate those into expectations regarding CenturyLink's financial reporting, or the degree to which they would have created inflation in the stock price at any given point.

93. As a primary point, it is important to note that the consumer-facing portion of the business was relatively small and declining. Again, Dr. Hartzmark has done nothing to evaluate any inflationary statements or to evaluate if any alleged misstatements regarding these portions of the business would be significant enough to have a material impact on the CenturyLink stock

¹²⁴ See for example "CenturyLink (CTL): Model Update and Thesis Summary," *Bernstein*, December 4, 2014, p. 2; "CenturyLink 4Q14 Results: Four Takeaways," *Bernstein*, February 12, 2015, p. 1; "Weakish Quarter; Tweaking Down EBITDA Estimate," *Oppenheimer*, February 12, 2015, p. 1.

price. Indeed, Consumer Strategic service revenue—an intersection between these operating and product/service segments that Plaintiffs focus on in their Complaint¹²⁵—was under 20 percent of the Company’s total revenue throughout the Class Period. (See **Exhibit 4B**.) As analysts noted, with the pending acquisition of Level 3 at the time of the allegedly curative disclosures, the Consumer segment would shrink from roughly one third of CenturyLink’s total revenue to roughly 25 percent or less of the combined entity’s revenue,¹²⁶ presumably leading to a roughly proportionate reduction in Consumer Strategic revenue to the post-merger entity as well.

3. *Analysis of Plaintiffs’ Alleged “Low Cramming” Period*

94. While Dr. Hartzmark has done no analysis himself, the Complaint—which he has assumed to be accurate—alleges that CenturyLink experienced revenue and other impacts when it temporarily moved away from the cramming-focused sales model before once again returning to a cramming-focused sales model. In particular, the Complaint alleges that CenturyLink implemented “a new behavioral coaching model for its sales employees” “as an attempt to lower the number of cramming incidents” around April 2014.¹²⁷ Plaintiffs’ witnesses allege that after experiencing a decline in sales, “the Company’s senior management reverted back to the old metrics system almost immediately,” causing revenues to grow.¹²⁸ The Complaint alleges that shortly after June 2, 2015, “CenturyLink’s return to the metrics-based system and strict enforcement of sales quotas began to take hold.”¹²⁹ In other words, the Complaint appears to

¹²⁵ See Complaint, Appendix A.

¹²⁶ See, for example, “CenturyLink Accused in Lawsuit of Signing Up Customers to Services They Didn’t Request,” *Morningstar*, June 16, 2017, p. 1; “The Roz Report: A Risk Framework for Recent CenturyLink Allegations,” *Barclays*, June 26, 2017, p. 1.

¹²⁷ Complaint, ¶¶ 109–14.

¹²⁸ Complaint, ¶¶ 112, 117.

¹²⁹ Complaint, ¶¶ 116–17.

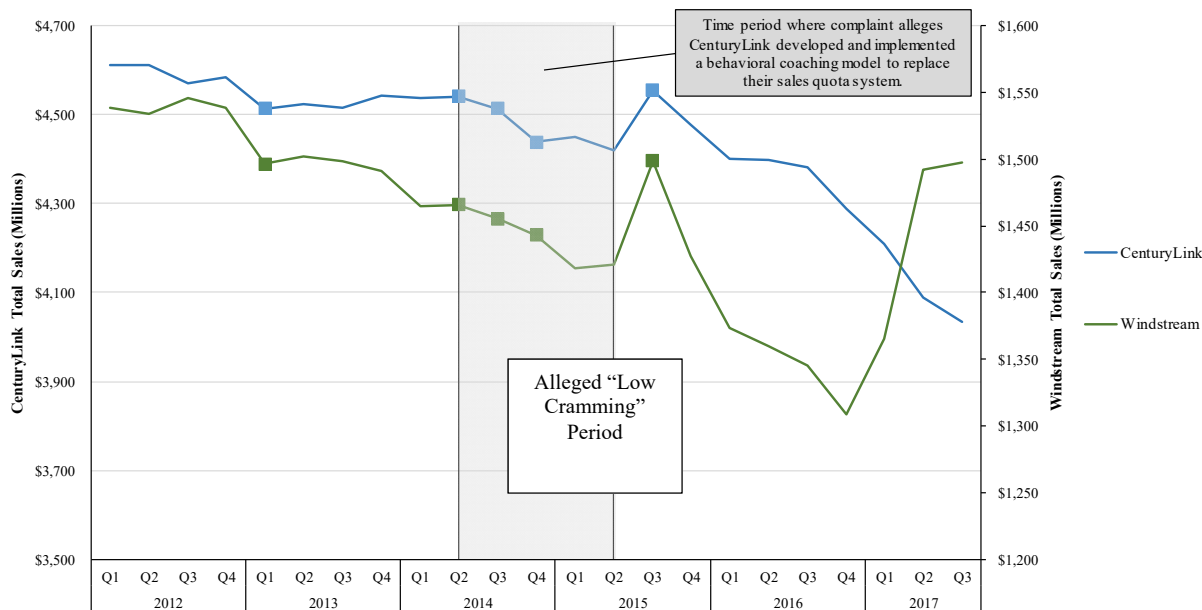
suggest that CenturyLink moved away from a “cramming-focused model” to a “low cramming model” for approximately a year in the spring of 2014 to the spring of 2015, but that it reverted to the “cramming-focused model” after this period.

a. Analysis of Revenue Trends Compared to Close Peer (Windstream)

95. CenturyLink’s revenue trends around the low cramming period are cited in the Complaint as supporting evidence of misconduct during the Class Period. While CenturyLink’s revenue did decline during the alleged “low cramming” period (between 2Q 2014 and 2Q 2015) and rise thereafter (beginning in 3Q 2015), the figure below shows that a close peer, Windstream (presumably with a sales model that was not identical in form or timing to CenturyLink’s), experienced similar movements in its revenue over this same period.¹³⁰ A review of both companies’ earnings releases for the relevant quarters (indicated with markers on the lines in **Figure 6**) reveals that these co-movements were at least partially the result of similar market forces and business strategies impacting both companies, and thus would have been observed at CenturyLink at least to some extent in the absence of any alleged cramming related sales practices.

¹³⁰ As shown in **Exhibit 28**, Windstream is commonly cited in analyst reports and other sources as a peer/competitor to CenturyLink. Analyst commentary over the Class Period also regularly cited the two companies as close peers and compared and contrasted their performance and reasons for similarities and differences. (See **Exhibit 19C**.)

Figure 6
Quarterly Sales of CenturyLink vs. Windstream



96. In **Exhibit 19B**, I list quotes from CenturyLink’s and Windstream’s earnings releases, 10-Ks, and 10-Qs for a number of quarters where the two firms displayed similar movements in revenue (indicated with markers on the lines in the figure above) and show common explanations for each. Below is a brief synopsis of similar explanations given by the two companies for the two quarters of clear decline within the alleged low cramming period, 3Q 2014 and 4Q 2014, and for the quarter of sharp growth that occurred directly after the alleged low cramming period ended, 3Q 2015.

- 3Q 2014:** Both firms experienced a decline in revenue and both cited revenue losses associated with voice services due to competition and product substitution to new technologies at other companies; wholesale losses due to switched access rate reductions coming from the Connect America and Inter-carrier Compensation Reform order; and the need to attract more broadband subscribers to remain competitive in the telecommunications landscape.

Consumer Services

- *CenturyLink*: Consumer: “Intense competition and product substitution continue to drive our **access line losses**. For example, many **consumers are substituting cable and wireless voice services and electronic mail, texting and social networking non-voice services for traditional voice telecommunications services**. We expect that these factors will continue to negatively impact our business,” ... “The decline in legacy services revenues for both periods was primarily due to declines in local and long-distance service volumes associated with access line losses resulting from the competitive and technological changes described above.”¹³¹
- *Windstream*: Consumer: “**Voice and switched access revenues will continue to be adversely impacted by future declines in voice lines due to competition from cable companies**, wireless carriers and providers using other emerging technologies,” ... “Decreases in voice service revenues were primarily attributable to the decline in voice lines...”¹³²

Wholesale Services

- *CenturyLink*: Wholesale: “Our **switched access revenues** have been and will continue to **be impacted by changes related to the Connect America and Intercarrier Compensation Reform order (“CAF order”)** adopted by the Federal Communications Commission (“FCC”) on October 27, 2011, which we believe has increased the pace of reductions in the amount of switched access revenues we receive in our wholesale segment.”¹³³
- *Windstream*: Wholesale: “Revenues from these services are expected to decline due to voice line losses and continued reductions in switched access rates,” ... “Decreases in **switched access revenues were primarily due to the impact of intercarrier compensation reform** and a continued decline in network demand.”¹³⁴

Broadband

- *CenturyLink*: “In order to remain competitive and attract additional **residential broadband** subscribers, we believe it is important to continually increase our broadband network's scope and connection speeds.”¹³⁵

¹³¹ CenturyLink 10-Q (2014 3Q), pp. 30, 31.

¹³² Windstream 10-Q (2014 3Q), pp. 49, 53.

¹³³ CenturyLink 10-Q (2014 3Q), p. 34.

¹³⁴ Windstream 10-Q (2014 3Q), p. 53.

¹³⁵ CenturyLink 10-Q (2014 3Q), p. 30.

- *Windstream*: “We continue to transition revenue streams away from traditional consumer voice services to our strategic growth areas of business services and **consumer broadband**...”¹³⁶
- **4Q 2014**: Both firms experienced a decline in revenue and both cited continued legacy telephone line losses.
 - *CenturyLink*: “**Consumer segment revenues decreased** by \$10 million, or less than 1%, for year ended December 31, 2014 as compared to the year ended December 31, 2013 and decreased by \$160 million, or 3%, for the year ended December 31, 2013 as compared to the year ended December 31, 2012. ... **The decline in legacy services revenues for both periods was primarily due to declines in local and long-distance service volumes associated with access line losses** ...”¹³⁷
 - *Windstream*: “For the year ended December 31, 2014, **consumer voice lines decreased** by approximately 107,700, or 6.3 percent compared to 119,600, or 6.5 percent during 2013,” ... “**Decreases in voice service revenues were primarily attributable to declines in voice lines.**”¹³⁸
- **3Q 2015**: Both firms experienced an increase in revenue and both cited acceptance of Connect America Fund Phase 2 support; and increased sales revenue from newer technologies including high-bandwidth and Ethernet.

CAFII Payments

- *CenturyLink*: “Our total operating revenues increased by \$40 million, or 1%, for the three months ended September 30, 2015 as compared to the three months ended September 30, 2014. The increase in total operating revenues was primarily due to the **additional revenue of \$158 million recorded in the third quarter of 2015 under the FCC's CAF Phase 2 high-cost support (“CAF Phase 2 Support”) program**” ... “The increase in other operating revenues was primarily due to additional revenue recorded under the CAF Phase 2 Support program and higher revenues related to an increased universal service fund contribution factor during the first seven months of 2015.”¹³⁹
- *Windstream*: “Operating results for the three and nine month periods ended September 30, 2015 were favorably impacted by **additional subsidy revenues received from the Connect America Fund (“CAF”) Phase II**, growth in enterprise revenues, reflecting increased demand for integrated data and voice services, multi-site networking and data center services” ... “Federal USF and CAF revenues primarily consists of frozen USF support, CAF Phase II support and ARM. The increases in the three

¹³⁶ Windstream 10-Q (2014 3Q), p. 47.

¹³⁷ CenturyLink 10-K (2014 4Q), p. 53.

¹³⁸ Windstream 10-K (2014 4Q), p. F-7, F-8.

¹³⁹ CenturyLink 10-Q (2015 3Q), p. 27.

and nine month periods ended September 30, 2015 are mostly attributable to the CAF Phase II incremental support of \$72.8 million received during the third quarter of 2015, which was retroactive to January 1, 2015.”¹⁴⁰

High-Bandwidth

- *CenturyLink*: “Revenue from **high-bandwidth data services** provided to Business customers, including MPLS, **Ethernet** and Wavelength, grew more than 7% year-over-year; Revenue from Consumer strategic services also grew more than 7% year-over-year.”¹⁴¹
- *Windstream*: “Consumer service revenue was up on a sequential basis with continued growth in high-speed Internet bundled revenue.” ... “Carrier service revenues were \$169 million, aided by growth in new **high-bandwidth WAVE sales** and wireless **Ethernet**.”¹⁴²

97. Even without a full analysis of loss causation, it is obvious from a review of the data that other, external, factors are involved in the observed revenue pattern around the period of the alleged low cramming sales model. As with the other analyses I have presented, this calls into question both the accuracy of the Complaint and the lack of any economic analysis showing whether or how a common method could be developed to accurately measure inflation and damages.

b. Analysis of Consumer Complaints

98. Plaintiffs further discuss the alleged low cramming period by stating that, “[a]fter CenturyLink returned to its prior sales model, billing complaints again began piling up, leading consumers to lodge complaints with their state attorneys general.”¹⁴³ However, analysis of the FCC’s Consumer Complaints Data¹⁴⁴ indicates that CenturyLink’s billing and cramming

¹⁴⁰ Windstream 10-Q (2015 3Q), p. 48, 53.

¹⁴¹ CenturyLink Earnings Release (2015 3Q), p.1.

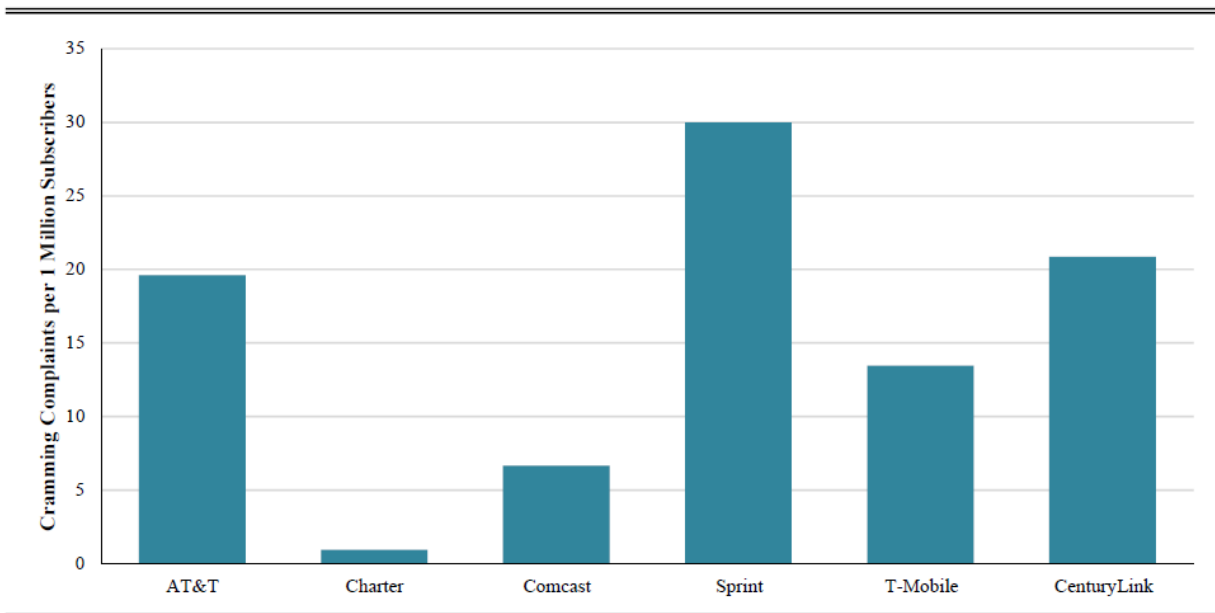
¹⁴² Windstream Earnings Release (2015 3Q), p. 1.

¹⁴³ Complaint, ¶ 131.

¹⁴⁴ Available via Freedom of Information Act request.

complaints are within the range of peer companies (*see Exhibit 20B - 20D*). In **Figure 7** below (also shown as **Exhibit 20C**), one can see that CenturyLink has a cramming complaint rate (per million subscribers) that is lower than Sprint, higher than others, and relatively similar to AT&T.

Figure 7
Total FCC Cramming Complaints per 1 Million Subscribers
October 2014 - June 2018



99. Similarly, CenturyLink's trends for both cramming and overall billing complaints follow the trends of the broader telecom industry (*see Exhibit 21 and Exhibit 22*).¹⁴⁵ **Figure 8** below shows the cramming-related complaints and **Figure 9** shows the overall billing-related complaints.

¹⁴⁵ FCC Consumer Complaints data is available from October 31, 2014 to present-day. CenturyLink-related FCC complaints data is from October 31, 2014 to June 2018.

Figure 8
Total FCC Industry and CenturyLink Cramming Complaints
By Month (thin line) and Average During the Quarter (thick line)
Q1 2015 - Q1 2020

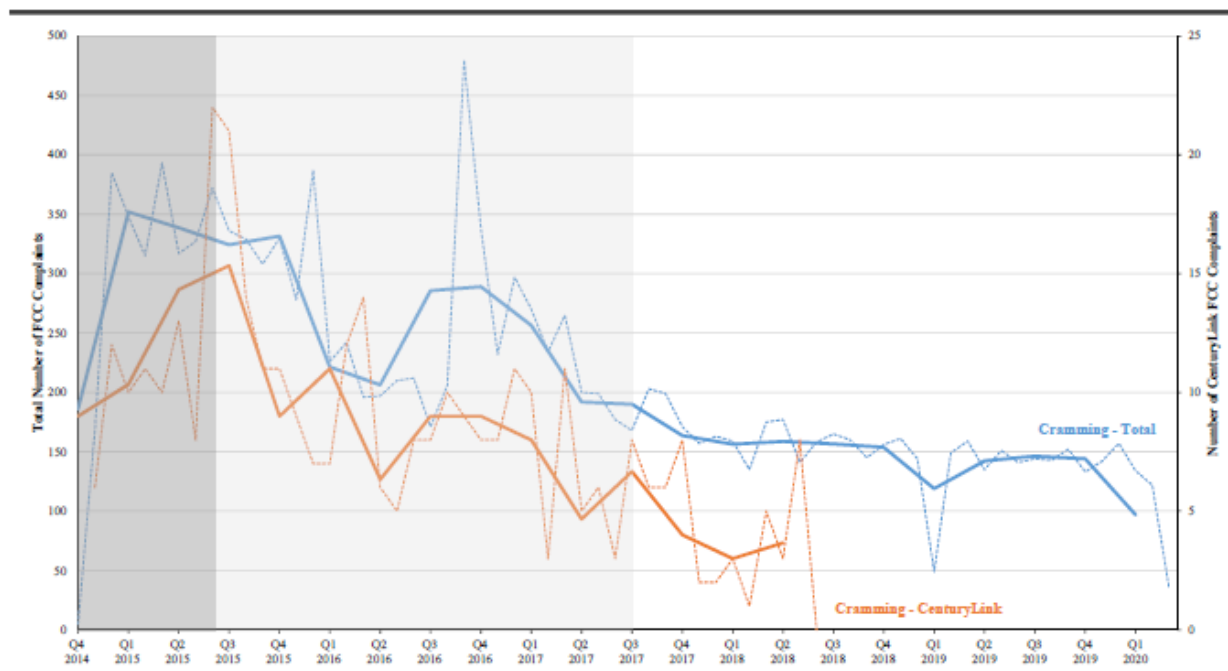
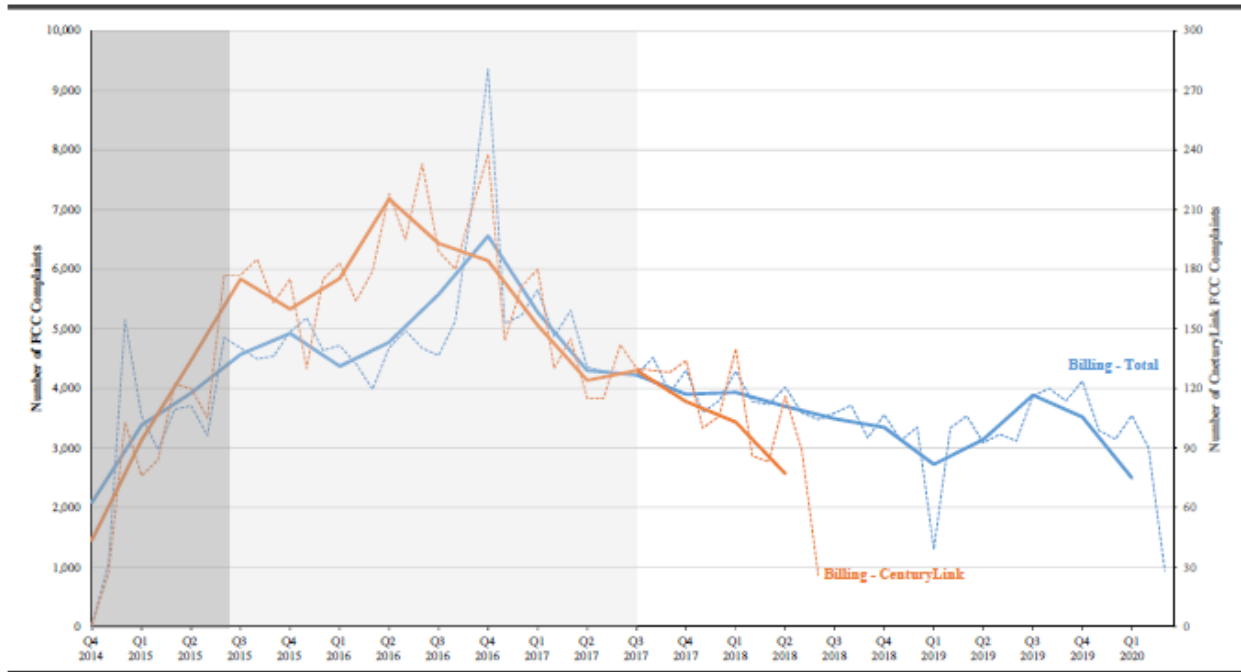


Figure 9
Total FCC Industry and CenturyLink Billing Complaints
By Month (thin line) and Average During the Quarter (thick line)
Q1 2015 - Q1 2020



100. Overall, the number of CenturyLink-related complaints received by the FCC is a small fraction of the total number of cramming and billing complaints received by the FCC, even though it is amongst one of the largest telecommunications companies in the industry. In absolute terms, there were never more than 25 cramming complaints in a given month and never more than 250 billing complaints in a given month against CenturyLink between October 2014 and June 2018.

101. Plaintiffs selectively use the same FCC complaints data to allege that “customer complaints and consumer segment revenues tracked the Company’s efforts to address the widespread deceptive billing practices at the Company.”¹⁴⁶ Plaintiffs’ accompanying chart in the

¹⁴⁶ Complaint, ¶ 120.

Complaint is misleading, as it heavily censors the vertical axis and condenses the horizontal axis to show trends over a very narrow window where the trends comport with their desired tracking.

I reproduce this chart from the Complaint in the figure below.

Figure 10
Complaint Figure Showing “Consumer Strategic Revenue” and
FCC Cramming and Billing Complaints



102. I present the unmodified data showing both Consumer Strategic revenue and consumer complaints (billing-related, cramming-related, and combined) intersecting the x-axis at zero and with a longer time period below in **Figure 11** below (also **Exhibit 23**.)

Figure 11
CenturyLink Consumer Strategic Revenue and
Total FCC Billing and Cramming Complaints by Quarter
Q1 2012 - Q2 2018



103. This chart shows that Consumer Strategic revenue was steadily increasing from Q1 2014 to Q2 2016, a period that includes the interval where Plaintiffs allege CenturyLink changed its sales practices to implement a behavioral coaching model that supposedly limited cramming. For the two-quarter portion of this approximately year-long “low cramming” period for which FCC complaints data is available (Q4 2014 to Q1 2015), the graph shows the number of complaints rising, even as the Company ostensibly took steps to allegedly limit deceptive billing practices (*see Exhibit 23 and Figure 11 above.*) This graph also shows that cramming-specific complaints were very low, and even declining, during the Class Period. In addition, the prior figures and discussion show that CenturyLink’s complaint patterns were very similar to the overall industry over this time period. Overall, this analysis illustrates the difficulty of

identifying a common damages method from Plaintiffs' Complaint, an exercise which Dr. Hartzmark has simply assumed away.

104. Additionally, Plaintiffs also conflate "Consumer **segment** revenues" with "Consumer **Strategic** revenue" in their chart and accompanying narrative in the Complaint. While the text of the Complaint narrative states that "customer complaints and **consumer segment** revenues tracked the Company's efforts to address the widespread deceptive billing practices at the Company," [emphasis added] but the chart actually shows trends in Consumer Strategic revenue.¹⁴⁷ As I have explained above, Consumer Strategic Revenue is a more granular revenue metric that is only one part of total Consumer segment revenue (the other part being Consumer Legacy revenue) and thus not fully representative of the consumer segment. Further, due to the changing definitions of CenturyLink's reporting segments, some revenue streams were periodically reclassified from Consumer Strategic to Consumer Legacy Services and vice versa and it is difficult to determine whether FCC complaints actually tracked the Consumer Strategic revenue. Finally, as shown earlier, CenturyLink's FCC complaint trends were similar to industry trends. It is not surprising that, given the heightened awareness of the Wells Fargo allegations, the number of complaints against both CenturyLink and the industry in total were increasing during 2015 and 2016.

V. ECONOMIC FRAMEWORK: FOCUS ON ALLEGEDLY CORRECTIVE STATEMENTS

105. As discussed, Dr. Hartzmark did not provide any analysis associated with the economic framework in this Action. Rather, he simply assumed that all of Plaintiffs' allegations

¹⁴⁷ Complaint, ¶ 120.

in the Complaint were accurate and that somehow they can all be translated into a common inflation ribbon or set of ribbons. With regards to the allegedly corrective disclosures, he simply conducts an event study to show that, using his model, the abnormal returns are statistically significant and negative on each of those dates. In a later section, I discuss more technical problems with his event study. In this section, I focus on the underlying premise that these dates should be assumed to be corrective disclosures and the price drops are measures of the impact of the revelation of the truth. Even without a full loss causation analysis, I show that there is no solid economic basis for Dr. Hartzmark's assumption that these represent corrective disclosures, and thus no economic basis to assume these can be readily used to develop a common method of accurately calculating damages.

106. As I have discussed earlier, in a "classic" securities fraud case, there is a fraud that begins at one or more dates (*e.g.*, "we landed a new contract"), which then causes the stock price to increase as investors and professionals anticipate future cash flows. At some point the fraud is revealed (*e.g.*, "we actually did not land that new contract"), which causes the stock price to decline. As discussed above, the economic framework in this case is different, more complex, and does not fit neatly into the "classic" securities fraud case where common methods of damages calculation are often developed.

107. In particular, the three alleged corrective disclosures in this Action are *not* disclosures of factual admissions by the Company and are *not* restatements of previously-reported financial results, as is typically true in a "classic" securities fraud matter. Instead, they are simply reporting about new lawsuits and investigations containing allegations, with no analysis of the substance of the allegations or whether, in fact, it turned out the lawsuits and investigations *actually did* reveal the types of massive fraud alleged by the Plaintiffs.

108. Furthermore, it is important to remember that the overall environment for consumer-facing financial and technology companies was very sensitive during this period due to the highly publicized concerns about Wells Fargo and its alleged practice of opening unauthorized accounts and selling unauthorized services. This context is important to consider in this Action when evaluating the economic framework around the alleged curative disclosures, which are essentially the reporting of allegations (occurring during a period of Wells Fargo-related FUD) contained within filed litigation, but are not proven facts.

109. For example, the first allegedly curative disclosure is the reporting of a former employee's lawsuit *alleging* a "Wells Fargo-type" fraud, which is clearly *not* the revelation of an *actual* large fraud at CenturyLink. In the case of Wells Fargo, for example, its first disclosure concerned an announcement that it had been fined \$185 million and had terminated 5,300 employees as a result of its sales practices concerns.¹⁴⁸ With investors on edge due to publicity around the Wells Fargo disclosure, it is unsurprising that there may have been some stock price reaction to allegations of similar practices at CenturyLink, as investors would have been concerned that CenturyLink *might* have had similar problems on a scale larger than the cramming and other allegations that were well known to investors in consumer-facing companies like CenturyLink.

110. However, allegations are not the same as actual facts, and lawsuits and investigations with claims or allegations that are not proven or do not result in accounting restatements, large layoffs, or other verified significant action should not be considered economic "fraud." Indeed, if a stock price moves simply due to uncertainty, it is important to

¹⁴⁸ "Timeline of the Wells Fargo Accounts Scandal," *abcNEWS*, November 3, 2016. Available at: <<https://abcnews.go.com/Business/timeline-wells-fargo-accounts-scandal/story?id=42231128>>.

recognize that the stock price movement itself is *never* the measure of the truth. It is either an *underestimate*, if the truth turns out to confirm the allegations and thus the probability of a fraud on the scale alleged turns out to be 100 percent rather than an initial uncertain estimate by investors. Alternatively, it may turn out to be an *overestimate*, where the truth turns out to not support the allegations and the probability of a fraud, at least on the scale alleged, turns out to be effectively zero percent. Neither Plaintiffs' Complaint, nor Dr. Hartzmark, have shown how a common model of damages can deal with this FUD-related uncertainty that may be causing CenturyLink stock price movements.

111. In the context of such uncertainty, it is helpful to consider the commentary of finance professionals such as equity analysts following CenturyLink. In the next section, I evaluate the extent to which finance professionals evaluated the news on the relevant dates.

A. Analysts' Reactions to the Allegedly Curative Disclosures on June 16 - June 19, 2017

112. One method of evaluating the reasonableness of the assumption that each of the three dates are true corrective disclosures is to examine the commentary and professional output of sell-side analysts. Sell-side analysts serve both as a proxy for informed investors and as the information intermediaries that parse and convey information to the investing public. For companies that they follow, sell-side analysts periodically issue investment recommendations (*e.g.*, Buy/Sell/Hold), price targets as of future dates, estimates of future revenues and earnings, and other similar information. An examination of changes in some of these metrics can be informative about the extent to which professionals following specific companies consider new information economically relevant. This, in turn, informs a presumption of a common method for calculating damages.

113. In this section, I focus on analyst responses to the alleged curative disclosures as noted in analyst reports issued in the days following the disclosures. In particular, I first focus on revisions in two measures released by analysts—price targets and quarterly revenue forecasts—before reviewing analyst commentary.

1. Analysts' Price Target and Revenue Forecast Revisions Following the June 16 and 19, 2017 Disclosures

114. The Complaint alleges that the market first learned of a whistleblower lawsuit filed by a former CenturyLink employee, Ms. Heidi Heiser, (“Heiser lawsuit”) on June 16, 2017, from a *Bloomberg* article entitled “CenturyLink Is Accused of Running a Wells Fargo-Like Scheme.”¹⁴⁹ Based on information in the Heiser lawsuit complaint, *Bloomberg* reported that the Company had allegedly engaged in a practice of charging for unauthorized services.¹⁵⁰ The *Bloomberg* article also made an association between billing issues at CenturyLink and the concerns about the recent and much-publicized Wells Fargo fake account scandal.

115. If any of this information was news to analysts, in ways that they considered sufficiently material to change their assessment of CenturyLink’s equity value, such a change would typically be reflected in their target price estimate. The Complaint alleges that: “Analysts immediately reacted and reassessed their views of CenturyLink stock based on these revelations, and connected the share price decline to the disclosures of the Company’s misconduct contained in Heiser’s lawsuit.”¹⁵¹ However, my review of the relevant analyst reports does not find support

¹⁴⁹ Complaint, ¶¶ 152–56.

¹⁵⁰ The Wells Fargo fake account scandal had come to public attention a few months prior, in September 2016. For a timeline of key events in the Wells Fargo scandal, *see*, for example, “Wells Fargo’s Twenty Month Nightmare,” *@CNMoney*, April 24, 2018. Available at: <<https://money.cnn.com/2018/04/24/news/companies/wells-fargo-timeline-shareholders/index.html>>.

¹⁵¹ Complaint, ¶ 155.

for such a conclusion about the reaction from financial analysts. As I show in **Exhibit 24**, not a single one of the 14 analysts that contributed target price estimates to Thomson Reuters in June and July 2017 lowered their target price estimate in the week following the June 16 (a Friday) and June 19 (a Monday) alleged corrective disclosures. In fact, the first contributing analyst to change their price target did so on June 29, 2017 (two weeks later) when they dropped the price target from \$24 to \$23 per share.¹⁵² About a week later, on July 5, 2017 Cowen & Company *raised* their price target from \$25 to \$27. If the analysts perceived the disclosures in the *Bloomberg* article on June 16 and June 19 to be significant in any respect or likely to be accurate reflections of a widespread fraud, they apparently did not consider it sufficiently significant for them to revise their valuation estimates underlying their price targets.

116. Since the allegations relate to CenturyLink's sales practices, I also reviewed the annual revenue forecasts that analysts periodically update through the fiscal year. This review is summarized in **Exhibit 25** and shows that in the two weeks following the June 16 and 19, 2017 publication of stories related to the Heiser lawsuit, only three of the 17 analysts who were actively contributing their estimates of annual full year revenue forecasts (to Thomson Reuters at the time) lowered their forecasts for FY 2017 revenue.¹⁵³ Analysts from Gabelli and Company attributed the reduction in their revenue FY 2017 estimates to factors that had nothing to do with the alleged corrective disclosures. Gabelli analysts said: "CTL noted that as a result of the colocation data center business sale on 5/1, the impact of this transaction will result in a

¹⁵² This analyst contributed their estimates to the Thomson Reuters database on an anonymous basis, so I cannot identify the particular investment bank or brokerage house from which the report was issued. The identity of the analyst and the issuing firm is known to Thomson Reuters but is not made public.

¹⁵³ Gabelli and Company, MoffettNathanson, and an anonymous contributor lowered their estimates of CenturyLink's annual FY 2017 revenue within two weeks of the June 16 and 17, 2017 alleged curative disclosures. The MoffettNathanson report was not available to me.

reduction of ~\$400 million to 2017 annual operating and core revenues ... ” and on that basis guided to a lower FY17 revenue estimate.

2. *Analyst Commentary Following the June 16 and 19, 2017 Disclosures*

117. I also reviewed the commentary in analysts’ reports that was published soon after the alleged corrective disclosures from June 2017 and that were available to me. For example, Morningstar’s report on June 16, 2017 downplayed the significance of the news by noting that it relates to the smaller and less strategically significant Consumer segment of the business.¹⁵⁴

Specifically, the report noted:

*These charges relate to the consumer division, which has been struggling for some time and accounts for only about one third of the firm's revenue ... We don't expect this will affect the merger. After the merger, the consumer division will only account for about one fourth of CenturyLink's revenue.*¹⁵⁵

118. Morgan Stanley’s note, issued on June 19, 2017, was titled “CenturyLink Lawsuit Raises Questions but Precedents Suggest Limited Impact.” Although it discussed the lawsuit in some detail, overall it did not consider the Heiser lawsuit to be consequential for CenturyLink’s investors.¹⁵⁶ The note said:

Telecom operators face lawsuits and regulatory actions for “cramming” extra services onto customer bills from time to time, but the ultimate settlements usually are not that material. For example, back in 2015 Verizon (\$90m) and Sprint (\$68m) agreed to settlements related to unauthorized charges on customer wireless

¹⁵⁴ “CenturyLink Accused in Lawsuit of Signing Up Customers to Services They Didn't Request,” *Morningstar*, June 16, 2017, p. 1.

¹⁵⁵ “CenturyLink Accused in Lawsuit of Signing Up Customers to Services They Didn't Request,” *Morningstar*, June 16, 2017, p. 1.

¹⁵⁶ “CenturyLink Lawsuit Raises Questions but Precedents Suggest Limited Impact,” *Morgan Stanley*, June 19, 2017, p. 1. Gabelli and Company also issued a report on June 19, 2017, but this report was silent on the Heiser lawsuit.

bills in a settlement with the FCC. AT&T (\$105m) and T-Mobile (\$90m) had settled the previous year.

... CenturyLink is a large company with ILEC operations in 37 states. There are several potential financial exposures to consider. First is the direct cost of litigating and ultimately resolving this lawsuit. Then there is the potential for other related costs from regulatory fines, customer refunds and other similar lawsuits etc. Finally, there is the ongoing business impact. To the extent that there has been overcharging, it will be important to assess how material it has been to the financial statements. It appears from the lawsuit that some of the alleged actions may have boosted metrics, but not all would have resulted in customer revenues.

... We would also expect the public utility commission in Arizona and potentially elsewhere (and possibly the FCC) to investigate the allegations. Indeed, it will be interesting to see whether customers have made any complaints in the past around these issues to regulators and what were the results of any of these proceedings.¹⁵⁷

119. As the above excerpts clearly show, Morgan Stanley analysts considered the issue in detail, anticipated the likely developments—including regulatory and legal developments—and concluded, based on available information, that it would have limited impact. The Complaint selectively cites this same report to give the false impression of a more dire Morgan Stanley opinion than what someone reading the full report would conclude.¹⁵⁸

120. A report issued from Bank of America Merrill Lynch (“BAML”) on June 22, 2017, focused on recent management changes and essentially dismissed the lawsuit as a mere “distraction.” In a section of the report devoted to the new lawsuit, it expressed an opinion similar to the one from Morgan Stanley, that is, that the lawsuit would have only limited impact. The report noted:

¹⁵⁷ “CenturyLink Lawsuit Raises Questions but Precedents Suggest Limited Impact,” *Morgan Stanley*, June 19, 2017, pp. 1, 2.

¹⁵⁸ Complaint, ¶ 156.

Lawsuit is a distraction, not relevant to M&A, in our view

*... [S]peaking with peers, we believe it is industry practice for carriers to monitor, record and review sales practices, allowing CTL to address the claim. Speculation about the potential monetary liability, **if anything eventually were to be discovered**, also appears hyperbolic in our view. According to the FTC, in 2014, it reached the 'largest ever' financial settlement with a major telecom carrier of \$105m. This would be equivalent to \$0.19/share for CTL.¹⁵⁹*

121. A Barclay's June 26, 2017 report also commented on the original lawsuit and a related subsequent class action lawsuit. The analysts essentially reached a similar "limited impact" conclusion since the lawsuit related to the strategically less significant consumer sector, noting:

Lawsuit Alleges Fraudulent Business Practices: In a wrongful termination lawsuit, a former CenturyLink employee alleged the use of fraudulent business practices in the company's consumer business. Specifically, the lawsuit claims employees were allowed to indicate customer approval of new services or lines which would sometimes result in charges that hadn't actually been authorized. Following the original claim, a separate class action lawsuit was filed.

... We also note that the allegations seem to focus on the company's consumer business, an area that will be less of a strategic focus for the joint entity (~24% of the joint entity). That being said, until further light is shed on the matter we do expect the allegations to be an overhang as the starting point status of the CenturyLink business remains a key question of the joint entity's prospects going forward.¹⁶⁰

¹⁵⁹ "New post-deal management structure plays to strengths," *Bank of America Merrill Lynch*, June 22, 2017, p. 1 (emphasis added).

¹⁶⁰ "The Roz Report: A Risk Framework for Recent CenturyLink Allegations," *Barclays*, June 26, 2017, p. 1 (emphasis added).

122. According to a July 5, 2017 report, analysts from Cowen and Company were unsure of the impact but also expressed doubt about finding sufficiently persuasive proof of wrongdoing in a well-regulated firm such as CenturyLink. Specifically, the report said:

We can simply book-end the risk: on one end the suit can be an unsubstantiated claim by a disgruntled worker, on the other extreme it could be a large-scale incentivized/compensated ‘Wells Fargo-like scheme.’ We have doubts from our own experience with care center operations, and the compliance/legal oversight involved as an FCC incumbent, anything in writing (customer care retention/upsell scripts, policy procedures, etc.) will surface nor can we foresee any corporate level directives explicit in writing. However unwritten/verbal persuasion (as alleged) and compensation structure could be so heavily influential (with negligent oversight) that fines could be levied, if proven.¹⁶¹

B. Analysts’ Reactions to the Alleged Curative Disclosures on July 12, 2017

1. Analysts’ Price Target and Revenue Forecast Revisions following the July 12, 2017 Disclosures

123. Once again, not a single one of the 14 analysts that contributed price targets to Thomson Reuters adjusted their price target in the interval between the July 12 disclosure and the Q2 2017 earnings announcement on August 2, 2017. (See **Exhibit 24.**) Over the same period, only four of the 17 analysts that contributed revenue forecasts to Thomson Reuters lowered their revenue estimates for FY 2017, while one actually *raised* their estimates in the same interval. (See **Exhibit 25.**)

¹⁶¹ “Introducing Combined LVL T Model; More Stable Ground but Questions Remain,” *Cowen and Company*, July 5, 2017, p. 5 (emphasis added).

2. *Analyst Commentary Following the July 12, 2017 Disclosures*

124. On July 12, 2017, the market learned via news reports that the Minnesota AG had filed suit against CenturyLink following a year-long investigation.¹⁶² According to the Complaint, the Minnesota AG’s complaint provided “significant and newly disclosed detail concerning the means by which the Company cheated customers.”¹⁶³ The news and details of the lawsuit were published in outlets including *Bloomberg*.

125. Morningstar issued a report on the day the news of the Minnesota AG’s suit was released, explaining that they had reduced their fair value estimate of CenturyLink stock as a result of the lawsuit (from \$36 to \$34 per share). They cited an expectation of consumer losses for a few quarters due to bad publicity (though not specifically because of any actual finding of fraud). Importantly, they did not mention an expectation of a shift in sales practices having a long-term impact on revenue, as would be expected if there was an expectation that past results had been based on practices that would discontinue into the future.

*The reduction of our fair value estimate is primarily due to reduced outlook on CenturyLink's consumer broadband business, as we believe the **publicity of these lawsuits** will likely result in residential customer defections for a few quarters. We now expect consumer broadband revenue to decline between 2% and 3% in 2017 and 2018, before resuming to low-single-digit growth in 2020 and 2021.*

... Our fair value estimate for the merged entity between CenturyLink and Level 3 is reduced to \$30 per share, down from \$32, while we value the stand-alone entity of CenturyLink at \$34 per share, down from \$36 per share. This is due to several lawsuits regarding its sales practices of overbilling customers, which we

¹⁶² Complaint, ¶¶ 163–64.

¹⁶³ Complaint, ¶ 164.

*believe would result in some customer losses over the next few quarters as a result of **bad publicity**.*¹⁶⁴

126. Days after the news of the Minnesota AG lawsuit, on July 17, 2017, analysts at BAML expressed using even stronger language than their opinion in June that the lawsuit should have a limited impact, stating that the issue had “been blown out of proportion in terms of timing and possible financial relevance.”¹⁶⁵

*Lawsuits. CTL shares have had a negative reaction due to various lawsuits stemming from a wrongful termination complaint filed by a former employee. The substance of the complaints, according to reports, relates to excess services sales reps were pressured to sell. According to the FTC, in 2014, it reached the ‘largest ever’ financial settlement with a major telecom carrier of \$105m. This would be equivalent to \$0.19/share for CTL. **We believe the issue has been blown out of proportion in terms of timing and possible financial relevance.** We will look to the call for any update the company can provide on the lawsuits.*¹⁶⁶

127. On July 19, 2017, analysts at Morgan Stanley acknowledged a pullback from investors after news of the Minnesota AG lawsuit, but observed that “the sell off looks overdone.”¹⁶⁷

*We think expectations are appropriately low heading into 2Q17 results, given cautious wireline industry commentary. The pending lawsuits create a NT overhang, but **the sell off looks overdone.** Reiterate Overweight.*

... Adjusted for the expected issuance of new shares for the Level 3 merger, the pullback has erased more than \$5b of market cap value. While there are several possible drivers of the decline, including

¹⁶⁴ “CenturyLink Sued by Minnesota Attorney General on Overbilling Customers; Cutting FVE to \$30,” *Morningstar*, July 12, 2017, p. 2 (emphasis added).

¹⁶⁵ “2Q preview & model book - Weathering tough 2Q and looking for better 2H,” *Bank of America Merrill Lynch*, July 17, 2017, p. 27.

¹⁶⁶ “2Q preview & model book - Weathering tough 2Q and looking for better 2H,” *Bank of America Merrill Lynch*, July 17, 2017, p. 27 (emphasis added).

¹⁶⁷ “2Q17 Preview: Counting Down to Level 3,” *Morgan Stanley*, July 19, 2017, p. 1.

*nervousness ahead of 2Q17 results, the primary driver has been the announcement of lawsuits alleging CenturyLink has been inappropriately charging customers.*¹⁶⁸

128. The Cowen and Company report released on July 24, 2017 notes that the lawsuit may be having an impact, but lists “broader fundamental erosion” as the number one driver of declines observed in CenturyLink and competitors Frontier and Windstream.¹⁶⁹

*The declines are partly driven by (1) broader fundamental erosion, specifically outsized legacy service declines and muted strategic growth against aggressive cable operators, and (2) partly by company specific issues (Frontier: CTF integration pain, CenturyLink: more recently consumer fraud allegations, Windstream: BDS headwinds).*¹⁷⁰

*Shares remain under pressure with challenged ILEC fundamentals, the guidance-miss set up, and the Consumer Fraud allegation, which have clearly become more legitimized with state lawsuits, making it incrementally more difficult to find a bottom in a worst case scenario view (and without any recent telco precedent).*¹⁷¹

129. Finally, in a report issued on August 3, 2017, analysts at Oppenheimer Equity Research expressed doubts on the allegations and did not expect the alleged fraud to be “about a material amount of revenue.”¹⁷² Specifically, the report said:

CenturyLink Accused of Aggressive Sales Culture; Unlikely, in Our Opinion: *Press reports in mid-June 2017 highlighted a lawsuit by a former CTL employee, accusing CTL of unethical/fraudulent sales tactics. While it's possible, we do not expect it was a material amount of revenue or anything fraudulent. We view any weakness as a strong buying opportunity, because even if the allegations are*

¹⁶⁸ “2Q17 Preview: Counting Down to Level 3,” *Morgan Stanley*, July 19, 2017 (emphasis added), p. 1.

¹⁶⁹ “C2Q17 Telco Services Preview,” *Cowen and Company*, July 24, 2017, p. 1.

¹⁷⁰ “C2Q17 Telco Services Preview,” *Cowen and Company*, July 24, 2017, p. 1.

¹⁷¹ “C2Q17 Telco Services Preview,” *Cowen and Company*, July 24, 2017, p. 5.

¹⁷² “CenturyLink and LVT Report In-Line Quarters; CTL Guides Down Slightly, as Expected; Focus Remains on Transformative Merger,” *Oppenheimer*, August 3, 2017, p. 3.

*true, CTL is turning over its management team and will be 70%+ enterprise-focused.*¹⁷³

130. As is clear from this discussion, to the extent financial professionals considered the lawsuits, they were at most uncertain whether the allegations were true. And, if any of the allegations were eventually shown to be true, they were uncertain of the scope of the problem. Overall, they generally expected minimal actual impact on financial performance, as reflected in the very limited revisions to financial targets. Importantly, Dr. Hartzmark himself has not done any analysis on the actual *resolution* of the litigations and investigations to determine whether, in fact, it was ever shown that there was real substance to the allegations. If a stock price reacts to the filing of litigation and the commencing of investigations that turn out to not have substance, these should not be considered a “curative disclosure” of an actual fraud, and cannot be the basis for a measure of common harm. In the logical extreme, if alleging fraud via lawsuit causes a stock to drop, and that FUD-related drop is then used as the basis for a common measure of damages in a securities lawsuit such as this, then there would be effectively *no way* for companies to avoid having a class certified, regardless of the economic substance of the allegations.

VI. DR. HARTZMARK’S EQUITY EVENT STUDY IS FLAWED

A. Background on Event Study Methodology

131. Dr. Hartzmark has conducted an equity event study and identified stock price changes for CenturyLink’s stock (ticker symbol “CTL”) on the three alleged curative disclosure dates that he claims are not explained by either overall stock market movements or movements

¹⁷³ “CenturyLink and LVT Report In-Line Quarters; CTL Guides Down Slightly, as Expected; Focus Remains on Transformative Merger,” *Oppenheimer*, August 3, 2017, p. 3 (emphasis in original).

due to industry effects. He has not identified any inflation ribbon, has not disaggregated the allegations and identified inflation ribbons that would be associated with various categories of allegations, or has not done any analysis on the reasonableness of the assumption that these dates revealing lawsuit allegations will be shown to be actual revelations of fraud. These are clearly serious limitations of his work, and by simply assuming such work can be done, Dr. Hartzmark provides no economic substance for any determination of common class issues related to measuring damages. In the remainder of this section, I focus more specifically on his methodology for his event study, identify problems, and show the impact of correcting these problems. I find that one of his alleged disclosure dates should not even be considered, given that it did not have a statistically significant decline.

132. Like Dr. Hartzmark, I have conducted an event study to determine the change in CenturyLink's stock price that can be attributed to firm-specific events, after isolating the impact of general market-wide and industry-wide factors. Event studies are a commonly-used set of statistical techniques that allow economists to measure the amount of security price movement that can be attributed to specific events.¹⁷⁴ On any given day, the price of a company's security moves in response to a combination of company-specific news, more general developments across the broader industry to which the company belongs, and evolving conditions for the market as a whole. The purpose of an event study is to identify the portion of security price movement (*i.e.*, the percent changes or "returns" on the stock at issue) that may be a consequence of company-specific news, after accounting for the impact of industry-wide and market-wide conditions on stock price movements.

¹⁷⁴ MacKinlay, A. Craig, "Event studies in economics and finance," *Journal of Economic Literature*, Vol. XXXV, March 1997 ("MacKinlay 1997"), p. 13.

133. For CenturyLink, I used the event study methodology to examine whether the allegedly curative disclosures on June 16, June 19, and July 12, 2017 had a statistically significant impact on CenturyLink's stock price on the respective disclosure days. As discussed earlier, I also used the event study methodology to investigate whether CenturyLink's alleged misrepresentations¹⁷⁵ potentially impacting the Company's stock price on 52 corresponding market days actually impacted CenturyLink's stock price on those days.

134. After identifying the event dates to be studied, the second part of an event study involves modeling and measuring the price response of the security to the event(s) of concern. This entails specifying a regression model that describes (1) the relationship between the returns of the security and the returns on portfolios of assets that reflect the market as a whole, and (2) the industry to which the firm belongs.¹⁷⁶ The researcher can then estimate (or "run") the regression model using data on security, industry, and market returns to obtain estimates of the regression model's coefficient values.¹⁷⁷ These estimated coefficient values allow the researcher to calculate the security's "predicted return," which is the level of return that one would expect given two of the factors that affect the security's returns: the actual returns of the industry and the overall market on the day of interest. As an example, if a coefficient on the broad stock market index is 0.5, if the overall market went up by 1 percent on a given day, the predicted

¹⁷⁵ Complaint, Appendix A and ¶¶ 190–263.

¹⁷⁶ MacKinlay 1997, p. 18. A regression is a statistical technique that measures the extent to which changes in the value of a particular variable (*i.e.*, the "dependent variable") are related to changes in the value of other variables (*i.e.*, the "explanatory" or "independent variables").

¹⁷⁷ For event study results to be reliable, it is necessary that the market for the underlying security is informationally "efficient," meaning that new publicly-available information is reflected in the stock price relatively quickly and accurately. For purposes of the analysis in this report, I assume that CenturyLink's common stock traded in an efficient market during all relevant time periods.

return for the stock being studied would be a 0.5 percent increase. A similar approach is used for the industry-specific return.

135. From this predicted return, the researcher can calculate the security's "abnormal return," "excess return," or "residual return" as the difference between the actual return on the security and the predicted return. An abnormal return that is greater than zero means that the stock had a higher return than would have been predicted by market and industry factors alone; for a negative abnormal return, the opposite is true.

136. In the final step in an event study, the researcher performs statistical tests to determine whether the abnormal returns are sufficiently large in either direction to be considered statistically significant.¹⁷⁸ Stock returns include random fluctuations over time, even in the absence of meaningful news. The purpose of a statistical hypothesis test is to determine whether, given the variability of returns of a security and controlling for market and industry factors, a particular day's abnormal return is within the bounds of random price movements described above. If an abnormal return is within these bounds, one says that it is not "statistically significant," or that it is impossible to distinguish from a result obtained purely by chance.

137. In terms of price impact, if the residual or abnormal return after an alleged misrepresentation or misstatement is not both positive and statistically significant, then there is no reliable evidence that the alleged misrepresentation caused artificial inflation of the stock price. Similarly, if an abnormal return following an alleged curative disclosure is not both

¹⁷⁸ Statistical significance at the 90 percent, 95 percent, and 99 percent confidence levels are usually presented. However, the 90 percent confidence level provides only weak evidence of statistical significance. *See, e.g.,* Ross, Sheldon M., "Introductory Statistics," *Academic Press*, 2005 (Second edition), p. 429. As a result, practitioners typically rely on significance at the 95 percent or 99 percent confidence level.

negative and statistically significant, then there is no reliable evidence that the alleged disclosure caused the removal of any alleged inflation.

B. Dr. Hartzmark's Estimates of Abnormal Return Depend upon His Model Assumptions

138. Consistent with the steps described above, I developed a regression model to estimate the abnormal return of CenturyLink's stock on certain days. I chose the same broad market index as Dr. Hartzmark, the S&P 500 index.¹⁷⁹ For the industry index, after a careful selection process, I chose the Dow Jones U.S. Select Telecom ("DJSTEL") index.¹⁸⁰ This choice is different from the industry index that Dr. Hartzmark selected, which I discuss below. Using the returns on these indices as explanatory variables, I estimated an event study regression for each event date at issue over a 120-day rolling event window that ends on the trading day prior to the event date. This choice of the length of the estimation window is consistent with Dr. Hartzmark's choice.¹⁸¹

139. To summarize, my regression model is similar to Dr. Hartzmark's other than in the following respects: (1) the choice of the industry index; (2) the days excluded from the estimation window; and (3) the method for calculating industry residuals. Regarding (2), unlike Dr. Hartzmark, my estimation window does not exclude earnings announcement days. Dr. Hartzmark excludes from his estimation period 21 days that relate to "the corrective disclosure dates alleged in the Complaint and days on which the Company announced earnings results.

¹⁷⁹ See Hartzmark Report, Appendix D for a detailed description of Dr. Hartzmark's event study model.

¹⁸⁰ Following a methodology similar to Dr. Hartzmark's, I removed the impact of CenturyLink's daily return from the daily returns on the industry index. See Hartzmark Report, Appendix D, p. 1, note 3.

¹⁸¹ As noted below, Dr. Hartzmark excludes earnings announcement days from his estimation window. I do not exclude these days. My estimates remain substantially unchanged when I exclude prior alleged curative disclosure dates (June 16 and June 19, 2017) from the July 12, 2017 regression.

These are dates on which CenturyLink's stock price might be affected by disclosures of unexpected firm-specific material information.”¹⁸² This exclusion is selective and, in my opinion, inappropriate. As the Complaint alleges, there were a total of 52 market days during the Class Period on which “unexpected firm-specific material information” could have impacted the CenturyLink securities prices. These include, among others, and as noted in Appendix A of the Complaint, days on which various 10-Ks and 10-Qs were filed and investor conferences were held (or the immediately following market day if the news was released after market hours). In contrast to Dr. Hartzmark's selective exclusion approach (excluding 21 of the 52 days) I include all trading days in the 120-day estimation window. Regarding (3) above, similar to Dr. Hartzmark, I use the residuals from a regression of industry returns on market returns (“industry residuals”) as an explanatory variable in my regression model, but I estimate this regression over a 120-day rolling window, whereas Dr. Hartzmark uses a fixed estimation window that spans the entire Class Period.¹⁸³ For ease of exposition, I refer to my specification of the regression model as the “Deal Model” and Dr. Hartzmark's specification as the “Hartzmark Model.” **Exhibit 26A** summarizes the abnormal return estimates for the three allegedly curative disclosure dates based on the Deal Model and the Hartzmark Model.

140. Dr. Hartzmark does not identify any specific days among the 52 potentially impacted market days where he identifies inflationary news and tests for positive abnormal returns. Instead, he only focuses on three specific alleged curative disclosure days. As I discussed earlier, I find that only four of the 52 alleged inflationary market days had positive and statistically significant abnormal returns, with others having negative and statistically significant

¹⁸² Hartzmark Report, Appendix D, pp. 2, 3.

¹⁸³ See Hartzmark Report, Appendix E, p. 18, note 7.

abnormal returns, and still others have returns that were not statistically significantly different from zero.

141. Using the Deal Model, I calculate abnormal returns on select event days and assess their statistical significance. For each of the three alleged curative disclosure days, I present the regression coefficient estimates and abnormal return, along with indications of their statistical significance, as well as a measure of overall fit/explanatory power of the model (“Adjusted R²”). **Figure 12** below (also shown as **Exhibit 26A**) presents my findings and compares these to Dr. Hartzmark’s findings.

Figure 12
CenturyLink Event Study Abnormal Returns on Alleged Corrective Disclosure Dates

	<i>Hartzmark Model</i>			<i>Deal Model</i>		
	<u>June 16, 2017</u>	<u>June 19, 2017</u>	<u>July 12, 2017</u>	<u>June 16, 2017</u>	<u>June 19, 2017</u>	<u>July 12, 2017</u>
Abnormal Return (AR)	-4.8%	-2.3%	-4.2%	-5.1%	-0.8%	-3.6%
t-statistics	(-3.96)	(-1.89)	(-3.46)	(-4.54)	(-0.68)	(-2.96)
p-values	0.000	0.061	0.001	0.000	0.499	0.004

142. I find that on June 16, 2017, after controlling for the impact of market- and industry-wide factors, CenturyLink’s stock experienced a stock price decline (that is, a negative abnormal return) of -5.1 percent.¹⁸⁴ This abnormal return was statistically significantly different from zero, as indicated by the t-statistic of -4.54. Dr. Hartzmark’s model specification yielded a statistically significant abnormal return estimate of -4.8 percent on this date.¹⁸⁵ (See **Exhibit 26B**.)

¹⁸⁴ **Exhibit 26B**, column [A].

¹⁸⁵ Hartzmark Report, p. 38.

143. On June 19, 2017, the abnormal return on CenturyLink's stock was -0.8 percent and was not statistically different from zero.¹⁸⁶ Using his specification of the regression model, Dr. Hartzmark estimates abnormal returns of -2.3 percent for this day, but also finds it not statistically significant at the commonly accepted 95 percent level.¹⁸⁷ Thus, despite the use of two somewhat different models, neither Dr. Hartzmark nor I find CenturyLink stock's abnormal return on June 19, 2017 to be statistically significant from zero when we use scientifically accepted standards for testing statistical significance.

144. Another difference in our approaches is that Dr. Hartzmark reports a two-day cumulative return over the June 16 and June 19 trading days. I do not believe it is appropriate to consider a two-day trading window. If, as Dr. Hartzmark determines, a stock trades in an efficient market, its price will respond to new information very quickly. By using a two-day return, Dr. Hartzmark has effectively used the large one-day abnormal return on June 16 to implicate June 19 as well, even though June 19 does not have a one-day statistically significant negative abnormal return.

145. Finally, I find that on July 12, 2017, after controlling for the impact of market- and industry-wide factors, CenturyLink's stock experienced an abnormal return of -3.6 percent.¹⁸⁸

¹⁸⁶ **Exhibit 26B**, column [B].

¹⁸⁷ See Hartzmark Report, p. 39. Regarding the determination of whether this return value is statistically significant, Dr. Hartzmark lays out the principles for such a determination in the appendix to his report, where he states: "I use the scientifically accepted level of certainty and declare statistical significance at a 95% level. This means that when CenturyLink's abnormal return is statistically significant, I can conclude that the CenturyLink abnormal return is outside the bounds of what would be expected by chance, with at least 95% confidence." Hartzmark Report, Appendix D, ¶ 9. Per Dr. Hartzmark's own (scientifically accepted) standards, his estimate of -2.3 percent abnormal return on CenturyLink stock on June 19, 2017 is not statistically significant from zero, even though in the body of his report he deviates from his elsewhere stated (and scientifically robust) principles and appears to suggest otherwise, stating that "[a]lthough the p-value of 6.12% denotes statistical significance above the commonly reported 5% level, it also indicates that the observed price decline is different from zero with a 94% level of confidence." Hartzmark Report, p. 39.

¹⁸⁸ **Exhibit 26B**, column [C].

This abnormal return was statistically significantly different from zero, as indicated by the t-statistic of -2.96. Dr. Hartzmark estimated statistically significant abnormal returns of -4.2 percent on this day.¹⁸⁹

C. Dr. Hartzmark's Choice of an Industry Index is Flawed

146. Dr. Hartzmark and I both use standard event study methodology to estimate the impact of significant news on CenturyLink's stock price. Despite the similarity in our overall approaches, we make a different choice regarding a key parameter in the event study methodology, specifically the industry index used to control for industry effects.¹⁹⁰ Dr. Hartzmark chooses the S&P Composite 1500 Telecommunication Services Total Return Index ("SPTRSC50"), while I select DJSTEL.

147. As noted earlier, while there are three differences between the Deal Model and the Hartzmark model, the industry index is the only one of these that makes a meaningful difference. To show that the difference in the industry index is the primary driver of the difference in abnormal return estimates between the Hartzmark Model and the Deal Model, in **Exhibits 27A - 27C** I show, side by side, the abnormal returns reported by Dr. Hartzmark (in column [A]) as compared to the estimates obtained from the Deal Model if the latter used the same industry index as Dr. Hartzmark (column [B]). The magnitude of abnormal returns in columns [A] and [B] on all three exhibits is close. That is, if I eliminate just one of the three sources of difference between the Deal Model and the Hartzmark Model (*i.e.*, the industry index), the resulting

¹⁸⁹ Hartzmark Report, p. 40.

¹⁹⁰ Brown and Warner (1985) find that in cross-sectional studies modeling choices generally do not have a material impact on the performance of event studies. *See* Brown, S. J. and J. B. Warner, "Using Daily Stock Returns: The Case of Event Studies," *Journal of Financial Economics*, 1985, 14(1): 3–23, p. 12. However, in securities fraud settings where single firms are analyzed, some modeling choices can have a significant impact on outcomes.

estimates from the two models are largely similar. A reasonable inference from this exercise is that any meaningful difference in estimates produced by the two models is because of the different industry index, rather than the other differences, such as the decision about particular dates to include or exclude.

148. To select the appropriate industry index for the Deal Model, I followed a systematic process which largely mirrors Dr. Hartzmark's reported method. First, I identified all indices available on *Bloomberg* that include CenturyLink stock and, based on a description of the index, narrowed the list down to those that covered domestic firms in the Telecom industry and for which daily index return data was available for the relevant period. This process identified all five of the indices that Dr. Hartzmark considers in his analysis as potential candidates plus an additional one, the DJSTEL.¹⁹¹ As a next step, from this set I identified the index that had the "best fit" in the regression model, as assessed by the statistical measure Adjusted R-squared.¹⁹² ¹⁹³ A higher Adjusted R-squared reflects a better statistical fit. I made this assessment for each of the three allegedly curative disclosure dates. As I show in **Exhibits 27A - 27C**, for each of the three dates, the regression model with DJSTEL as the industry index has a much better fit, as measured by Adjusted R-squared, than models using most of the other industry indices tested, including the one selected by Dr. Hartzmark (*i.e.*, SPTRSC50). For instance, in **Exhibit 27A**, the

¹⁹¹ Hartzmark Report, Appendix D, p. D-1, note 2.

¹⁹² See Baum, Christopher F., "An Introduction to Modern Econometrics Using Stata," *Stata Press*, 2006, pp. 77–78. In a regression model, Adjusted R-square measures the proportion of variation in the dependent variable (in this case CTL daily returns) that is explained by the variation in the independent or explanatory variables (in this case the returns on the market and industry index). A value of 0.45, or 45 percent, in a regression estimate of the Deal Model would indicate that the industry and market index explain 45 percent of the variation in CTL returns.

¹⁹³ In the set of industry indices tested, the S&P Supercomposite Alternative Carriers Sub Industry Total Return Index ("S15ALTC") yields an Adjusted R-squared of greater than 90 percent in the regression model, and should therefore qualify as the index with the "best fit." But a closer examination shows that the high Adjusted R-squared is explained by the fact that CenturyLink is the biggest of its very few constituents, so Index returns are driven by CTL returns and the two are highly correlated. Thus, this is not a good candidate for inclusion in the event study model.

regression model that uses the DJSTEL index (column [G]) has an Adjusted R-squared of 0.45 as compared to 0.20 in the regression model that uses Dr. Hartzmark's industry index. Similarly, estimates for the other two dates in **Exhibit 27B** and **Exhibit 27C** show that the regression model which uses the DJSTEL index (column [G]) has an Adjusted R-squared that is more than twice as large as the regression model that uses Dr. Hartzmark's industry index (column [B]).

149. As a final check on the appropriateness of my chosen industry index, I also reviewed constituent firms in the DJSTEL index and compared them to the list of CenturyLink peers identified in other sources. I present this analysis in **Exhibit 28**. First, I reviewed the peers that CenturyLink identifies to benchmark the Total Shareholder Return ("TSR") on its stock and found substantial overlap between the 18 firms (excluding CenturyLink) in the DJSTEL index and the 26 peers identified as benchmarking peers in CenturyLink's 2017 proxy.¹⁹⁴ As a second reasonableness check, I identified four brokerage firms that issued an analyst report on CenturyLink in both 2013 and 2017 (the start and end of the Class Period) and that had also listed a set of peers or close competitors for CenturyLink. I found that any peer that was identified by more than one source in 2013 and 2017 was included in the DJSTEL index. Thus, my choice of the DJSTEL index for estimating the event study model regressions is supported by a robust selection process.

150. In his deposition, Dr. Hartzmark discussed that he identified candidate indices and then selected the one with the best fit.¹⁹⁵ The index I selected, and which he did not consider, had

¹⁹⁴ Like many firms, CenturyLink's proxy identifies two sets of peers, one for benchmarking executive compensation and one for benchmarking firm performance. These two sets are not identical.

¹⁹⁵ Hartzmark Deposition, 114:8–115:8; 122:14–123:3.

the best fit among a set of reliable indices that might be considered. Regardless, his own selection criteria would suggest that the index I selected was preferable to the one he selected.

151. In addition to the fact that the DJSTEL provides a better statistical fit, Dr. Hartzmark's choice of SPTRSC50 is also less appealing on other grounds. **Exhibit 29A** shows that, as of the end of July 2017, the DJSTEL index included more firms than SPTRSC50 (19 vs. 14), with 12 firms that were common to both indices. **Exhibit 29B** shows that DJSTEL has an additional seven firms that do not overlap with SPTRSC50 constituent firms and the latter index has two firms that do not overlap with DJSTEL constituents. Focusing on firms that are excluded from one of the two indices, I find that DJSTEL-only firms had an average market capitalization at the end of 2016 of \$13.0 billion, which is equivalent to CenturyLink's \$13.0 billion market capitalization. In contrast, the average market capitalization of Dr. Hartzmark's SPTRSC50-only firms is much smaller at \$1.1 billion.

152. A comparison of average sales for the DJSTEL-only firms and the SPTRSC50-only firms tells a similar story. In fiscal year 2016, DJSTEL-only firms reported average sales revenue of \$10.9 billion, which is closer to CenturyLink's revenue of \$17.5 billion than the \$0.327 billion average for the SPTRSC50-only firms. Further, unlike SPTRSC50, the DJSTEL index includes firms such as Sprint, T-Mobil, and Vonage. These firms are a prominent part of the telecommunications industry and have similar economic opportunities and risks as CenturyLink.¹⁹⁶ Finally, the DJSTEL index includes a mix of firms, including those with the 3-digit SIC code 481 (representing the Telephone Communications sector) and the code 489 (which includes providers of Communications services via satellite). By contrast, the SPTRSC50

¹⁹⁶ "CenturyLink, Inc. (CTL) - Financial and Strategic SWOT Analysis Review," *GlobalData*, June 13, 2016, p. 29; "CenturyLink's Legacy Businesses Declined while Strategic Services Disappointed; Shares Undervalued," *MorningStar*, May 4, 2017, p. 17; "Changing its Stripes...Very Slowly," *Macquarie Research*, May 3, 2017, p. 5.

is focused primarily on SIC 481.¹⁹⁷ Overall, the DJSTEL index captures the economics of a broader segment of the telecommunication sector while also including additional firms that, on average, share the economic characteristics of CenturyLink. For these reasons, as well as the fact that it provides a better statistical fit in the regression model, DJSTEL is a better index for the purpose of the analysis in this report.

D. Intraday Evidence of Price Impact

153. As discussed, Dr. Hartzmark has done nothing to assess the economic reasonableness of the allegations in the Complaint. In addition, he has not attempted or described a method by which inflation ribbons can be developed based on different allegations and different dates. While he does review certain intraday trading prices and news releases, he does not describe how such an analysis would be used to develop a common method to calculate damages. In this section, I also review the intraday trading information. I find that the price reactions to information often move in directions and magnitudes different than those that would be predicted based on a simple assumption that the Complaint will be shown to be true. Dr. Hartzmark has not described, much less calculated, how a common method would account for this variability and inconsistency.

1. June 16 and July 12, 2017

154. For two alleged corrective disclosure days, June 16 and July 12, 2017, Dr. Hartzmark identifies specific news stories that he concludes potentially explain a substantial

¹⁹⁷ CenturyLink is a major provider of fixed broadband access. Competing technologies that can also provide “high-speed internet,” and therefore influence CenturyLink’s economic prospects, include: Cable Modem, Wireline - Fiber, Wireline - DSL and other, and Satellite & Fixed Wireless. This is in addition to mobile broadband through the mobile phone and other devices. See “USTelecom Industry Metrics and Trends 2018,” *USTelecom*, March 1, 2018, pp. 3, 4, and 19.

portion of intraday price movements.¹⁹⁸ I find that on June 16, despite the numerous news stories that were published after the 1:50 pm *Bloomberg* story (most of which reiterated the facts noted in the original *Bloomberg* story), CenturyLink's price recovered a substantial portion of the lost ground after an initial sell off. (See **Exhibit 30A**.) CenturyLink's stock price on July 12, 2017 rebounded somewhat after the initial dip even as the news was reported on major newswires such as *Reuters* and *DowJones*, before it drifted down towards the end of the day. (See **Exhibit 32A**.)

2. June 19, 2017

155. As noted, I do not find June 19, 2017 to have a statistically significant negative abnormal return. My event study analysis shows that, consistent with Dr. Hartzmark's results, on June 19, 2017, CenturyLink stock did not experience a one-day negative abnormal return that was statistically significant at the conventional 95 percent level. My analysis shows that CenturyLink stock's -0.8% abnormal return on June 19, 2017 has an associated p-value of 0.498, indicating that the observed price decline is different from zero with only a 50% level of confidence. However, I still conducted an intraday analysis on this day to illustrate the set of issues faced in identifying common damages measures.

156. In contrast to his discussion of the June 16 intraday prices, for June 19, Dr. Hartzmark points to no particular news story that could possibly explain a substantial portion of intraday price movements. Rather, he simply cites to the Complaint and makes a general assertion that, "[o]ver the weekend and throughout June 19, 2017, there were numerous news

¹⁹⁸ Hartzmark Report, Appendix C, pp. 359, 360, 372–74.

stories, analyst reports and ‘reports of consumer class actions alleging systemic billing misconduct,’ many of which were related to the alleged corrective disclosure.”¹⁹⁹

157. My analysis of relevant news stories from the close of market on Friday, June 16, 2017 to the close of market on Monday, June 19, 2017 identifies 19 news headlines, nine of which are press releases from law firms announcing that they are opening investigations into or filing suits against CenturyLink for its alleged cramming. (See **Exhibit 31B**.) Using intraday minute-by-minute price data, I show that on June 19, 2017 CenturyLink’s stock price did not appear to move in concert with, or in response to, the arrival of specific news that is relevant to this Action.

158. **Exhibit 31A** shows CenturyLink stock’s minute-by-minute price movement on June 19, 2017. Over the weekend prior to June 19, 2017 and before the market opened on the morning of June 19, 2017, at least three news stories were published with headlines such as “CenturyLink worker files lawsuit alleging fraud” and “CenturyLink faces class-action lawsuit seeking up to \$12 billion.”²⁰⁰ (See events [1], [2], and [3] in **Exhibit 31B**.) Yet CenturyLink’s stock price opened on Monday at the same level as the Friday market close and, in fact, saw a sharp increase right after the 9:30 AM open, reaching its highest level at 9:35 AM. From there, between 9:55 AM and 10:55 AM, despite the 10:13 AM news release by Reuters/Bloomberg reiterating the \$12 billion lawsuit charged against CenturyLink (Event [6] in **Exhibit 31B**), CenturyLink stock kept steadily climbing and reached an even higher point than the opening price. The Equity Alert at 11:41 AM, the Shareholder Alert at 12:25 PM, and the news release at 12:49 PM that “Glancy Prongay & Murray LLP Commences Investigation on Behalf of

¹⁹⁹ Hartzmark Report, p. 39.

²⁰⁰ Factiva News Search.

CenturyLink, Inc. Investors”²⁰¹ (events [7] [8] and [9] in **Exhibit 31B**) were all followed by slight stock price increases. The 4 alerts and news stories that arrived after 2:00 PM (events [13] [14] [15] and [16] in **Exhibit 31B**), did not have much immediate impact on price, as the by-minute price remained stable toward the end of the trading day (and the price bounced back above where it had been just prior to those announcements).

159. It is true that through the day, CenturyLink’s stock saw an overall decrease in value on June 19, 2017, though not a statistically significant negative abnormal return. However, there is insufficient evidence to show that the 1.4% decrease is directly caused by any allegedly curative disclosures made that day. Notably, the only incidences of immediate price drop after the arrival of news was at 9:40 AM (Event [5] in **Exhibit 31B**) and at 1:42-43 PM (event [11] and [12] in **Exhibit 31B**). However, CenturyLink’s stock price bounced back starting from 9:43 AM and 1:50 PM, respectively, with no additional news. The major price declines during the day, for example from 10:54 AM to 11:31 AM, 12:29 PM to 12:36 PM, and 1:24 PM to 1:33 PM, were not immediately preceded by any news release. Therefore, the price movement and the timing of news arrival on this day do not seem to have any apparent correlation.

160. Second, the overall price drop is not unique to CenturyLink. I also plotted the by-minute price movement of Windstream, one of CenturyLink’s main comparable competitors. Windstream, which had no allegedly curative disclosures on June 19, 2017, also saw a similar price movement on the same day. Hence, it is uncertain if CenturyLink’s overall price drop is directly reduced by the curative disclosure or is simply reflective of a sub-industry effect and/or investor sentiment on that particular day.

²⁰¹ Factiva News Search.

161. For all the reasons stated above, it is my opinion that although the closing price on June 19, 2017 was indeed lower than the opening price, the by-minute movement of CenturyLink's stock price is not consistent with the assumption that the drop can be considered a timely response to the arrival of specific allegedly corrective news. Thus, an assumption that this can be used for a common method of determining class damages is incorrect.

162. It is unclear from his report whether Dr. Hartzmark is arguing that the price reaction on June 19, 2017 was a delayed reaction to news released on June 16 or was a reaction to new information that came to light over the weekend and on the day itself. Careful analysis does not support either argument. The delayed reaction argument is not plausible, given Dr. Hartzmark's own evidence on market efficiency for CenturyLink stock. Additionally, Dr. Hartzmark and my analyses of intraday stock prices on June 16 and July 12 show that the stock price reacts rapidly (near-instantly) to the arrival of relevant news. Since the news was relatively straightforward, there is no reason to believe that the market needed additional time to process the information. The second argument, that it was new information or the cumulative effect of the new information that drove the stock price decline, is also not persuasive. As I have shown, the stock price movement does not correlate well with the arrival of specific news, and is marked by periodic positive spikes, which weighs against an accumulation of bad news theory.

163. Since the price movement on June 19 cannot plausibly be tied to the alleged curative disclosure on June 16, it does not make sense to consider a two-day cumulative abnormal return as Dr. Hartzmark has done.²⁰²

²⁰² Hartzmark Report, p. 39.

164. In summary, I agree with Dr. Hartzmark regarding the use of event studies to identify abnormal returns. I also agree that on June 16 and July 12, 2017, there were abnormal returns that exceed the commonly used 95 percent statistical level of confidence, though our estimates differ due to his use of an inferior industry index. Neither of us finds the one-day June 19, 2017 abnormal return to meet the 95 percent statistical level of confidence, and when using my model it is not even close. I disagree that a two-day time window is a valid approach for measuring abnormal returns. I also conduct additional economic analysis that show that Dr. Hartzmark's blanket assumption that Plaintiffs' allegations will be shown to be true and can be used as the basis for a common approach to calculating damages is not supported, even without a full analysis of loss causation.

VII. DR. HARTZMARK'S 7.60% NOTES EVENT STUDY IS FLAWED

165. Dr. Hartzmark offers an opinion with respect to only one of CenturyLink's outstanding debt securities, the 7.60% Notes.²⁰³ For the 7.60% Notes, he opines, "[t]hroughout the Class Period, CenturyLink's 7.6[0] % Note[s] traded in an efficient market."²⁰⁴ As part of his tests for market efficiency, he performs what he calls a "cause and effect" analysis that documents the price reaction of the 7.60% Notes in response to unexpected new information disclosed to market participants.²⁰⁵ Specifically, he evaluates the price impact of credit ratings downgrades, which occurred on three separate occasions during the Class Period (as I detail

²⁰³ The 7.60% Notes is 30 year redeemable Note that was issued on September 21, 2009 and is due on September 15, 2039. It originally had a total face value of a \$400 million. In 2011, CenturyLink "reopened" the series and issued an additional \$400 million of debt securities with the same terms, except for the issue price and the issue date. The amount outstanding for the 7.60% Notes was \$800 million throughout the Class Period. *See* CenturyLink Form 8-K, September 22, 2009, Exhibit 4.1, pp. 1–6. *See also* CenturyLink Form 8-K, June 16, 2011, p. 2.

²⁰⁴ Hartzmark Report, p. 6.

²⁰⁵ Hartzmark Report, pp. 68–73.

below), and concludes that “the information about the credit rating decline was new, material, unanticipated information, which resulted in a price decline for the 7.6[0]% Note[s].”²⁰⁶

166. The 7.60% Notes are obviously not stocks. Notwithstanding this, Dr. Hartzmark also examines “whether the 7.6[0] % Note[s] prices reacted to the alleged corrective disclosures in a way that is consistent with what would be expected of a **stock** that trades in an efficient market.”²⁰⁷ [emphasis added] He concludes that “generally, all three disclosures with potential impacts have the expected statistically significant price responses.”²⁰⁸

167. To reach these conclusions, in part, Dr. Hartzmark conducts an event study analysis which yields an estimate of the “abnormal return” for the 7.60% Notes on each of the six dates (March 14, 2013; March 15, 2016; October 31, 2016; June 16, 2017; June 19, 2017; and July 12, 2017). There are two primary problems with his event study method for the bond price analysis, which are described below.

168. **Calculation of Prices and Returns Incorporating “Before” and “After”**

Disclosures: Dr. Hartzmark’s methodology for calculating average daily bond prices (from which returns are calculated) on days on which unexpected news was disclosed in the middle of the trading day is *ad hoc* and flawed, which results in measures of daily bond price returns that are themselves incorrect.²⁰⁹ As I show below, since daily bond returns are a key input in the bond event study model, inaccurate estimates of raw returns on key disclosure dates will yield

²⁰⁶ Hartzmark Report, p. 72.

²⁰⁷ Hartzmark Report, p. 78.

²⁰⁸ Hartzmark Report, p. 78.

²⁰⁹ Daily bond returns are simply the percentage change in daily bond prices.

inaccurate estimates of abnormal return or, equivalently, of price inflation that is attributed to alleged misstatements or omissions.

169. **Industry Index Used:** Dr. Hartzmark includes two equity indices in his bond study (*i.e.*, one overall market index and one industry-specific index). While combining equity-based indices and bond prices has its own challenges, my previous discussion showed that, at a minimum, his industry index SPTCR50 should be replaced with the superior DJSTEL industry index.

A. Dr. Hartzmark’s Measurement Method for “Before” and “After” Daily Price Changes on Disclosure Days is Flawed and Biases the Results

170. One notable feature of bond markets, as Dr. Hartzmark acknowledges, is that bonds, on average, trade less frequently than stock.²¹⁰ With only a few (and sometimes no) trades each day, a bond’s last trade price at the end of the trading session may not be representative of the value of the bond at a different point in time. Therefore, instead of using the closing price to calculate daily returns, as is typically done in equity event studies that rely on daily market data, academic research recommends the use of daily average transaction prices that are weighted by trade size, also known as volume weighted average prices (“VWAP”).²¹¹ The calculation of VWAP is straightforward, but when unexpected new information arrives in the middle of a trading day (“mid-day disclosures”), VWAP calculations require greater care. As Dr. Hartzmark

²¹⁰ Hartzmark Report, pp. 52–53.

²¹¹ Bessembinder, Kahle, Maxwell, and Xu (2009), a well-regarded study on bond event study methodology, recommends the following practices for improving the power of the tests in TRACE-based event studies: (1) calculate bond returns from average daily trade prices where each transaction price is weighted by trade size (VWAP), (2) exclude trades of less than \$100,000 par value when calculating average daily prices, (3) calculate abnormal bond returns using value-weighted rating/maturity benchmarks, and (4) combine returns on a firm’s bonds into a single firm return. *See* Bessembinder, H., K.M. Kahle, W. F. Maxwell, and D. Xu. 2009. Measuring abnormal bond performance. *Review of Financial Studies* 22 (“Bessembinder et al. 2009”), 4219–58.

himself notes: “[W]hen disclosures are made in the middle of the trading day, VWAP combines transactions from both before and after the disclosure. Thus, when examining cause-and-effect, this can affect the empirical results.”²¹² In such cases, assuming informationally efficient markets (as Dr. Hartzmark argues is the case for CenturyLink’s 7.60% Notes), the researcher cannot calculate pre-disclosure or post-disclosure VWAP as the weighted average price for *all* transactions on the date of the disclosure. The transaction prices prior to the disclosure have not impounded the new information whereas, assuming market efficiency, the transactions prices after the disclosure likely have. Nor is such an assumption necessary, as data on bond prices and trading dates have time stamps that allow one to parse disclosure days into relevant periods for calculation of VWAP.

171. Of the three alleged curative disclosure dates, the Complaint identifies a specific curative disclosure and its timing only for two dates, June 16, 2017 and July 12, 2017.²¹³ The two mid-day disclosures occur around 1:50 PM (June 16, 2017) and 12:04 PM (July 12, 2017).²¹⁴ Dr. Hartzmark’s VWAP measurement problems relate to how he treats the mid-day arrival of information. For the June 16, 2017 mid-day disclosure, Dr. Hartzmark considers the full day of June 16 to be the pre-announcement or pre-disclosure date and calculates VWAP using *all* transactions on June 16, 2017 between 9:30 AM and 4:00 PM. In contrast, I calculate the pre-announcement price as the weighted average price from all transactions on June 15, 2017 plus

²¹² Hartzmark Report, pp. 68–69=. Dr. Hartzmark considers the disclosure day as the pre-announcement day if a majority of the bond transactions (in terms of aggregate par value traded) take place before the arrival of the new information. *See also* Hartzmark Report, Exhibit 21, notes [A] and [B].

²¹³ The third date, June 19, 2017, had an announcement over the weekend between a Friday and Monday and had several other disclosures through the trading day on Monday. I consider the VWAP based on all transactions over June 19, 2017 as the post-disclosure price.

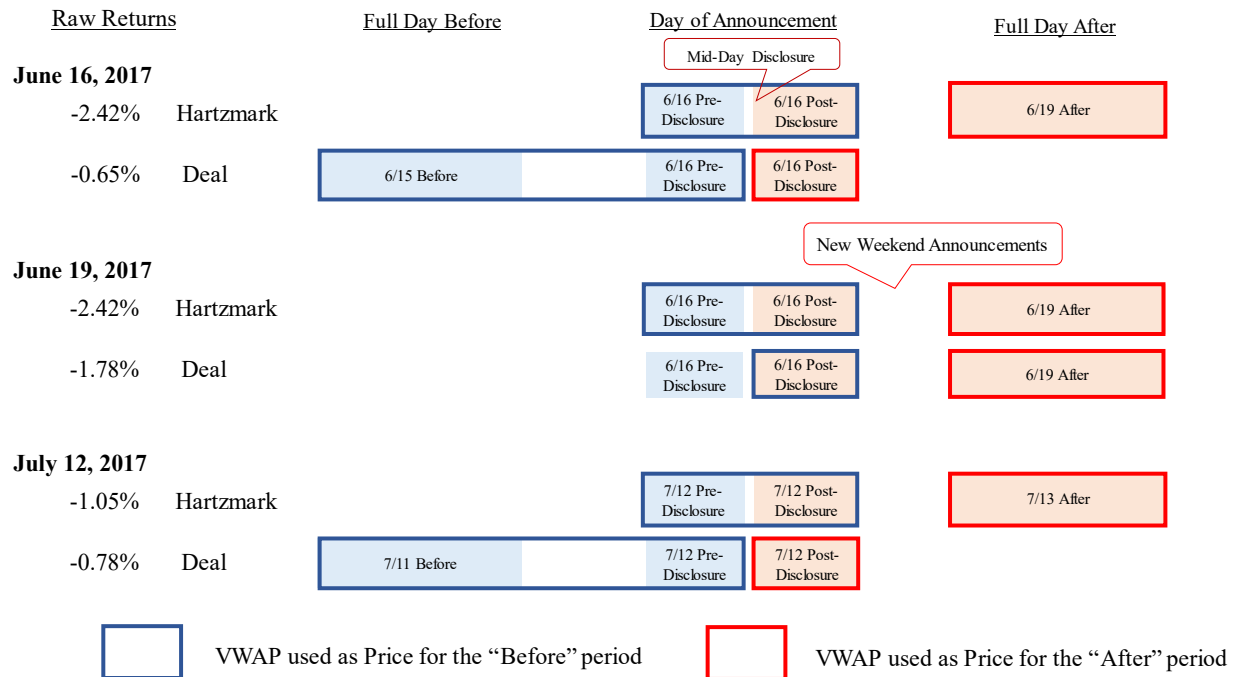
²¹⁴ Hartzmark Report, p. 79.

the transactions from June 16 that took place prior to the disclosure.²¹⁵ The remaining transactions on June 16, 2017 till market close at 4:00 PM contribute to the post-disclosure VWAP. I follow the same approach for all disclosure days with mid-day disclosures.

172. Dr. Hartzmark's approach for July 12, 2017 is identical to the one for June 16, 2017; that is, he effectively treats all July 12 transaction prices as pre-disclosure prices. **Exhibit 33** summarizes Dr. Hartzmark's and my approach towards VWAP calculation on specific disclosure days. The figure below illustrates the approaches used for the "before and after" periods for the three alleged disclosure days. As one can see, I parse the disclosure day into pre-disclosure and post-disclosure components, whereas Dr. Hartzmark often has either a pre-disclosure or post-disclosure period that is a mix of actual pre-disclosure and post-disclosure trades.

²¹⁵ For disclosures made mid-day, I have also considered the weighted average of all prices prior to the disclosure versus the weighted average of prices after the disclosure on the same day as the before and after prices for cause and effect analysis.

Figure 13
Illustration of Before and After Time Periods Used for Alleged Corrective Disclosure Dates



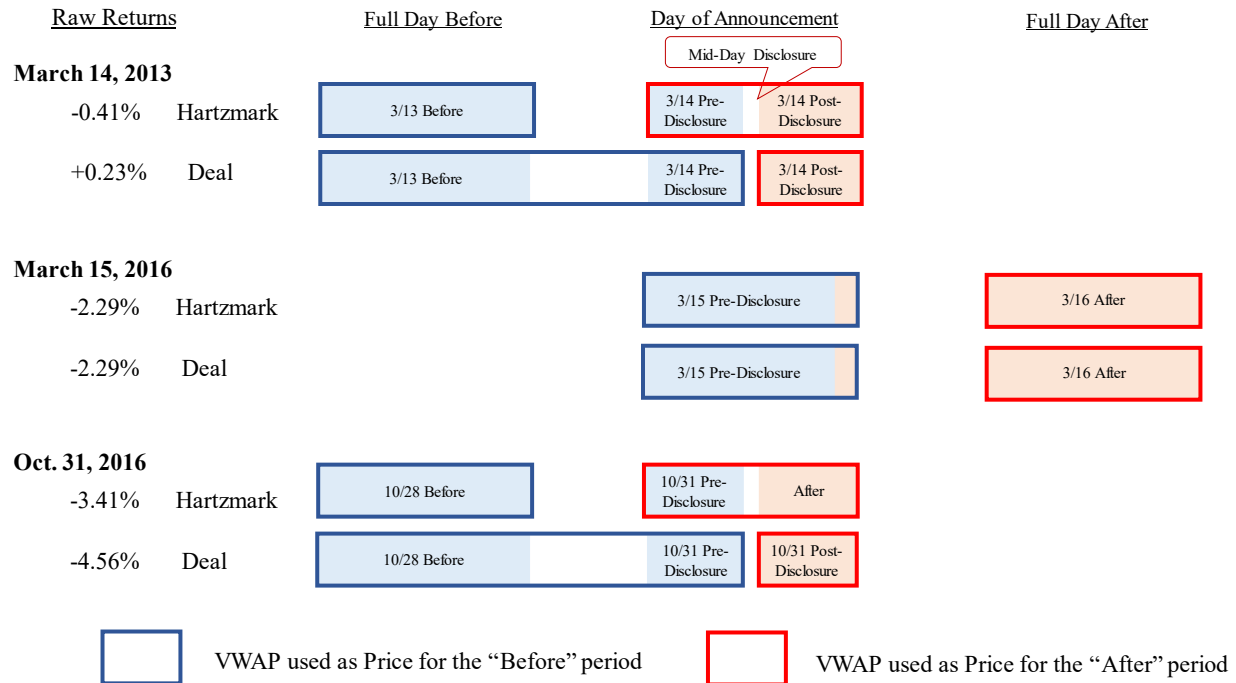
173. Dr. Hartzmark also examines the price impact of three ratings downgrades for the 7.60% Notes that were announced during the Class Period.²¹⁶ For two of the dates on which such downgrades were announced, March 14, 2013 and October 31, 2016, he considers the VWAP based on all transactions that day as the *post*-announcement price (different from what he did for the two dates discussed in the previous paragraphs).²¹⁷ In contrast, I consistently calculate pre-announcement prices based on transactions on the day prior to the disclosure day *plus*

²¹⁶ On March 14, 2013, Moody’s downgraded the 7.60% Notes to Ba2, with the announcement coming at 11:07 AM. On March 15, 2016, Moody’s further downgraded the 7.60% Notes to Ba3, with the announcement coming at 3:45 PM. Finally, on October 31, 2016, S&P, Fitch, and Moody’s all put the 7.60% Notes on negative credit watch, with the announcements coming at 12:14 PM, 2:42 PM and 2:54 PM, respectively. Hartzmark Report, pp. 68, 70–72.

²¹⁷ Dr. Hartzmark’s report considers the disclosure day as the post-announcement day if a majority of the bond transactions (in terms of aggregate par value traded) take place before the arrival of the new information. *See* Hartzmark Report and work papers.

transactions before the announcement on the disclosure day. The figure below illustrates our respective approaches:

Figure 14
Illustration of Before and After Time Periods Used for Bond Downgrade Dates



174. The downgrade announcement on March 15, 2016 came close to the end of the trading day, and there were no trades following the disclosure before the end of the trading day. Both Dr. Hartzmark and I treat this day as the pre-disclosure day.

175. **Exhibit 34** and the figure above summarize the daily returns calculated using Dr. Hartzmark’s method and my method for calculating VWAP. A comparison of 1-day raw returns (*i.e.*, percentage change in daily VWAP) shows that Dr. Hartzmark’s *ad hoc* approach results in larger daily returns (in absolute terms) on all corrective disclosure days, as compared to my consistent approach to identifying pre- and post-announcement prices. For instance, for the June 16, 2017 alleged curative disclosure, 1-day raw returns are -2.42 percent with Dr. Hartzmark’s approach versus -0.65 percent with mine. For the June 19, 2017 alleged corrective disclosure, 1-

day raw returns are -2.42 percent with Dr. Hartzmark's approach versus -1.78 percent with mine. For the July 12, 2017 alleged curative disclosure, 1-day raw returns are -1.05 percent with Dr. Hartzmark's approach versus -0.78 percent with mine. In addition, the analysis of ratings downgrades finds that for March 14, 2013, the Deal Raw Returns actually have a positive, rather than a negative, sign.

176. In the next section, I use the Deal Raw Returns, rather than the Hartzmark Raw Returns, to estimate the bond event study model and calculate abnormal returns on key disclosure days, after also correcting for the industry index.

B. Dr. Hartzmark's Bond Event Study Model for Measuring Abnormal Returns is Flawed

177. Similar to an equity price event study, a bond price event study is designed to isolate the impact of an event on the value of a bond by excluding the impact of other factors that also affect bond value. In designing a bond market event study, a researcher confronts certain issues that are distinct from issues that are relevant for equity event studies. This point was highlighted in a comprehensive review of bond event study methodologies, which noted that, "[t]he methodology utilized for stocks cannot simply be applied to bonds, as bonds present several features that strongly distinguish them from stocks. An erroneous model could lead to false conclusions about the impact of new information on a firm's debt."²¹⁸

178. Like he does for the equity event study, Dr. Hartzmark uses a market index and an industry index. Dr. Hartzmark's bond event study model uses:

a slightly different specification of the regression model [as compared to his equity event study]. As with a single-issuer common

²¹⁸ Maul, D. and D. Schiereck., "The bond event study methodology since 1974," *Review of Quantitative Finance and Accounting*, 2017, 48: 749–87 ("Maul and Schiereck 2017"), p. 749.

*stock, this approach uses a so-called market model to partition a single company's bond price movement on each trading day into various components. ... [T]o run the market model I add explanatory variables to the market model specification used for CenturyLink's common stock that account for these two other exogenous factors.*²¹⁹

179. The two exogenous factors that Dr. Hartzmark adds to the market model specification are default risk and “daily return of a treasury security with the same time-to-maturity.”²²⁰ Academic research has documented that, as compared to other models, the use of either single factor or multi-factor market model has less power to detect abnormal performance when such abnormal performance is in fact present.²²¹

180. To illustrate the sensitivity of Dr. Hartzmark's bond model's abnormal returns to model and VWAP choices, I make the two adjustments to his analysis noted above. First, I adjust the calculation of daily returns using the VWAP method discussed above. Second, I replace the industry index in his model with the DJSTEL index, which I also used in the equity event study model. With just these two modest adjustments, the abnormal returns on the six dates are markedly different from those calculated by Dr. Hartzmark. (See **Exhibit 34.**) The figure below summarizes the abnormal returns calculated using the Hartzmark Model and the Deal Model.

²¹⁹ Hartzmark Report, pp. 65–66.

²²⁰ Hartzmark Report, pp. 66–67.

²²¹ Maul and Schiereck 2017 say that, “While the market model provides an elaborated procedure to measure abnormal returns for stockholders ... its application to bond event studies contains several empirical issues. One issue is the potential non-stationarity of the beta coefficient. Elton et al. (2011) discuss the application of the single-index model to bonds and argue that the bond beta equals the ratio of the duration of the bond and the duration of the index. On this basis, the beta decreases with time and the decrease becomes steeper as the bond approaches maturity.” Maul and Schiereck 2017, p. 769. Bessembinder et al. 2009, using the term “factor model” for multi-factor market models similar to the one used by Dr. Hartzmark, find “significant problems when using the Lehman index and the FF [Fama French] factor model to construct abnormal bond returns, for both the investment grade and the noninvestment grade samples. ... The standard deviation of monthly excess returns is much larger for the factor models than for the other approaches, in both the investment grade and noninvestment grade samples. This suggests that the factor-based approaches will have less power to detect abnormal performance when it is in fact present.” Bessembinder et al. 2009, pp. 4236–4237.

Figure 15
Summary of 7.60% Notes Event Study Abnormal Returns for
Three Alleged Curative Disclosure Dates and Three Bond Rating Downgrade Dates

	Disclosure Date			Downgrade Date		
	16-Jun-17	19-Jun-17	12-Jul-17	14-Mar-13	16-Mar-16	31-Oct-16
	[A]	[B]	[C]	[D]	[E]	[F]
Abnormal Return (AR):						
• Hartzmark						
1-day AR	-2.65%	-2.46%	-1.22%	-0.28%	-2.42%	-2.80%
<i>t</i> -stat	(-4.42)	(-4.10)	(-2.16)	(-0.30)	(-1.91)	(-2.97)
2-day Cumulative AR		-5.05%		-0.24%	-4.18%	-5.99%
<i>t</i> -stat		(-6.02)		(-0.18)	(-2.35)	(-4.56)
• Deal						
AR	-0.65%	-1.99%	-1.21%	0.33%	-2.39%	-3.78%
<i>t</i> -stat	(-1.09)	(-3.20)	(-2.00)	(0.35)	(-1.89)	(-3.93)

181. Overall, the magnitude of the negative abnormal returns is smaller for the alleged curative disclosure dates when using the Deal Model. In fact, on one of the three alleged curative disclosure days, June 16, 2017 (column A in the figure above), I obtain abnormal returns that are not statistically significantly different from zero whereas, using his *ad hoc* and flawed methodology, Dr. Hartzmark calculates an abnormal return of -2.65 percent, which is highly statistically significant.

182. Similarly, when using my methodology, abnormal returns are significant at conventional levels (with 95 percent confidence) for only one of the three ratings downgrade dates, October 31, 2016, when all three ratings agencies downgraded the 7.6% Note (columns D and F in **Figure 15** above). Dr. Hartzmark also finds statistically significant negative returns on only one of the days (-2.8 percent on October 31, 2016, column F). While this analysis of bond downgrade days undermines Dr. Hartzmark's conclusion of bond market efficiency for the 7.60% Notes, I do not conclude that there is a sufficient basis to determine that the 7.60% Notes do not trade in an efficient market.

183. For each of the disclosures, Dr. Hartzmark also measures returns over multiple days, an approach that I consider inappropriate in this context. If, as Dr. Hartzmark argues in his report, the market for CenturyLink's 7.60% Note is efficient²²² with adequate liquidity and a substantial fraction of traders that are sophisticated, then it should not take several days for new information to be processed by the market. It is noteworthy that he does not raise the issue of complexity of information when discussing equity market reaction to the same information.

184. In summary, I find that Dr. Hartzmark's bond price event study method is flawed, and corrections eliminate one of the alleged corrective disclosure dates. In addition, the same critiques raised in the discussion of equity prices regarding his assumption of the Complaint's allegations being accurate and his corresponding assumption that a common method for damages calculations can be used, also apply in this context.

VIII. CONCLUSION

185. Dr. Hartzmark has done no economic analysis regarding the reasonableness of his assumption that all of Plaintiffs' allegations of inflation and curative disclosures in the Complaint are true. He simply assumes this to be the case. The actual substantive analysis he did was focused on market efficiency for CenturyLink's equity and 7.60% Notes and the development of an event study for measuring abnormal returns for each. I agree with his market efficiency findings, but find flaws with his event study methodology for equities and for bonds, which have a material effect on his estimates. For CenturyLink's equity, the June 19, 2017 date does not have statistically significant abnormal returns. For the 7.60% Notes, the June 16, 2017 date does not have statistically significant abnormal returns.

²²² Hartzmark Report, p. 6.

186. Dr. Hartzmark's opinion regarding common methods for determining damages is simplistic and uninformative, and he fails to consider anything regarding the economic substance or context of Plaintiffs' specific allegations in this particular case. He essentially states that someone (not him, apparently) could develop an inflation "ribbon" over time. The ribbon would need to incorporate the complexity of the allegations in this Action:

- It would need to be **scaled** to vary over time based on the 52 market days potentially impacted by the alleged inflationary misstatements (each of which would need to be **parsed** to separate non-fraud information from allegedly fraudulent information);
- It would need to be **further scaled** to account for the alleged "low cramming" period in the middle of Class Period;
- It would need to be **parsed** to account for the five different categories of alleged misrepresentations, any one of which might be found to not be fraud;
- It would need to be **scaled** to vary across the two remaining (after eliminating those not statistically significant and negative) alleged corrective disclosure dates;
- It would need to **account for** the FUD affecting stock and bond prices vs. any truth to the allegations in the lawsuits and investigations, including any material resolution, findings, or expected material impact on future cash flows,

187. Dr. Hartzmark has done nothing to support or describe his assertion that one or more inflation ribbons can be developed in this Action given these facts and these allegations. His "common method" appears to simply be subtraction, meaning that one can compare inflation at purchase and inflation at sale and see if there is a difference, having made the huge assumption that a common inflation ribbon or ribbons can be developed by someone that accurately reflects the combination of allegations in this matter.

188. Just because in much simpler cases with simpler facts it may be possible to describe how to develop a common method for calculating damages does *not* mean that is true for every such matter. And certainly with the complex set of allegations present in this Action,

simply stating that it will be done later is insufficient, based on my decades of working on class action matters of all types, and securities class actions in particular.

189. I further find that the economic framework around these allegations is not supportive of an untested assumption that, effectively, everything in the Complaint is true. I find the inflation allegations to be so general as to be nearly meaningless. An initial review of the actual facts around the 52 alleged inflationary dates are not supportive of the allegations and are not supportive of an assumption that they represent inflationary statements due to widespread cramming and can thus be used for the development of a common damages calculation method.

190. Similarly, for the alleged corrective disclosures, Plaintiffs' allegations in this Action that news regarding additional lawsuits, which themselves contain unproven allegations, should be considered corrective disclosures with no additional testing or analysis is not economically reasonable, and is effectively circular and self-fulfilling. Dr. Hartzmark has done nothing to show that this assumption is based on a solid economic foundation. My own economic analysis finds that this assumption is not well founded, and that for this Action, assuming that stock price drops on two days with statistically significant declines where unproven lawsuits are announced is the basis for an allegation of a likely curative disclosure is not a sufficient economic basis for the determination of a common damages impact for the entire class.



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March 23, 2020

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Mr. Deal leads the economic consulting practice in the Menlo Park, CA office of Analysis Group. He has over 25 years of experience in economic, litigation, and management consulting. He has led hundreds of projects requiring complex economic analysis of publicly available and internal client information.

He has served as an expert witness in dozens of litigation and regulatory matters, and has been retained as a neutral expert in a complex mediation. His work as an expert has covered a variety of practice areas, including antitrust, finance and securities litigation, damages, and business valuation. Mr. Deal's industry experience has included health care, insurance, technology, telecommunications, and many others.

Prior to joining Analysis Group, Mr. Deal spent several years as a senior consultant and manager with Arthur Andersen. In this position, he provided financial and management consulting services to hospitals, physicians, and other clients, in such areas as operational organization and efficiency, merger and consolidation strategies, current and projected financial performance, and overall strategic planning.

Mr. Deal has taught economics and analytic methods to graduate students at Harvard University and published articles on economics-related topics. He has also consulted on national economic policy issues to the government of Indonesia through the Harvard Institute for International Development.

He coauthored a major report, *The Economic Effects of Federal Participation in Terrorism Risk* with R. Glenn Hubbard, an Analysis Group affiliate and former chair of the President's Council of Economic Advisers. In addition, he also coauthored a study, *Economic Impact Analysis: Proposition 71 California Stem Cell Research and Cures Initiative* with Laurence Baker, an Analysis Group affiliate and Stanford University School of Medicine faculty member, with whom he published an updated interim economic report on California's stem cell initiative. Mr. Deal is also the coauthor of a chapter on the use of econometrics in antitrust litigation for a recent American Bar Association publication.

EDUCATION

1994–97	Ph.D. coursework completed, Public Policy, Graduate School of Arts and Sciences, Harvard University, Cambridge, MA
1990	M.P.P., Public Policy, Kennedy School of Government, Harvard University, Cambridge, MA
1987	B.A., <i>Summa cum Laude</i> , Economics and Global Studies (double major), Pacific Lutheran University, Tacoma, WA

SUMMARY OF PROJECTS BY TOPIC***Insurance (Health Insurance Included in Health Care Section)***

- *Confidential Universal Life Litigation*
Consulting expert on economic issues in a large cost of insurance (COI) charges litigation.
- *Mayumac v. Met Life*
Testifying expert on economic damages in a disability insurance matter.
- *Various Military Housing Projects v. Ambac*
Testifying expert on economic, insurance, and financial issues surrounding the use of credit enhancements and financial performance for large military housing projects.
- *Credit Disability Insurance*
Analysis of financial issues in a case alleging improper disclosure of changes in premium levels.
- *Life Insurance Consulting*
Valuation and analysis of a portfolio of large life insurance policies.
- *Long Trust v. Morgan Stanley*
Analysis of financial issues and damages resulting from alternative policy restructuring options for second-to-die estate planning life insurance policies.
- *Insurance Tax Litigation*
Consulting expert in a confidential tax litigation involving the tax treatment of certain insurance premiums.
- *Confidential Auto Insurance Litigation*
Analysis of issues relative to claims handling practices of a large auto insurance company.
- *Confidential Life Insurance Litigation*
Analysis of damages resulting from alternative portfolios of investments and second-to-die life insurance policies.
- *Confidential Insurance Litigation*
Analysis of damages resulting from lost commissions in an insurance broker insurance litigation.
- *Katz v. Mass Mutual*
Analysis of potential damages in a disability insurance litigation.
- *Confidential Insurance Litigation*
Expert on insurance valuation and general damages issues in a dispute involving non-traditional life insurance.
- *Markocki v. Olde Republic Title Insurance*
Expert on class certification issues in a class action regarding charges for title insurance.
- *Campbell v. Metropolitan Life*
Expert on damages calculation in a disability insurance dispute.

- *Cox v. Allstate*
Expert on statistical sampling in the class certification phase of a class action alleging improper homeowners' insurance claims handling by Allstate.
- *Confidential Title Insurance Matter*
Consulting effort on class certification matters in a large multi-state class action.
- *Estate Planning Life Insurance Matter*
Consulting expert analyzing issues associated with the economic performance of a portfolio of large estate planning life insurance policies.
- *Confidential Homeowners' Insurance Matter*
Consulting expert analyzing issues associated with the use of various data sources to obtain replacement values.
- *Confidential Indemnity Insurance Investigation*
Consulting expert analyzing issues associated with the deterioration of a set of financial products insured by an indemnity insurer.
- *Confidential Auto Insurance Investigation*
Consulting expert analyzing various aspects of auto insurance claims issues.
- *Confidential Life Insurance Litigation*
Consulting expert valuing life insurance policies and other damages issues.
- *Confidential Life Insurance Litigation*
Consulting expert valuing life insurance policies and other damages issues.
- *Hausman v. Union Bank*
Testifying damages expert valuing life insurance policies and other damages issues. Expert report provided.
- *Perez v. First American Title Insurance Company*
Testifying expert evaluating class certification issues relating the use of electronic data in identifying class members.
- *Windham v. Cook Life Insurance Litigation*
Testifying expert valuing policy performance of a variable universal life insurance contract used in a tax planning program. Expert report and trial testimony provided.
- *Confidential Class Action Litigation*
Consulting expert analyzing statistical issues associated with the use of a software package used to assist in evaluating bodily injury claims.
- *Confidential Class Action Litigation*
Consulting expert analyzing statistical issues associated with diminished value claims in auto insurance.
- *Pavlov, et al. v. CNA*
Testifying expert analyzing class certification issues associated with long-term care insurance.

- *Confidential Class Action Litigation*
Consulting expert analyzing statistical issues associated with claims handling in auto insurance.
- *Class Action v. CNA*
Testifying expert in case involving long-term care insurance premium rates.
- *Confidential Pension Litigation*
Consulting expert in analysis of actuarial and accounting issues in a defined benefit pension plan.
- *Best Buy v. DDR, October*
Testifying expert in analysis of insurance costs applicable to common areas of retail developments.
- *Barnes & Noble v. DDR*
Testifying expert in analysis of insurance costs applicable to common areas of retail developments.
- *Fireman's Fund v. Cunningham Lindsey*
Testifying expert in analysis of damages related to third-party administration of a commercial auto insurance program.
- *Confidential Regulatory Investigation*
Consulting expert in analysis of policy forms used by a property casualty insurer and corresponding policy forms approved by state regulators.
- *Variable Annuity Remediation*
Consulting expert in analysis of remediation for deficiencies in administering variable annuities. Assisting with analyzing remediation package and negotiating with regulators and other parties.
- *CSR v. Lloyd's Underwriters*
Testifying expert in coverage litigation involving liability insurance. Report focused on the availability and worldwide capacity for liability insurance during the relevant periods.
- *Economic Impact of Federal Participation in Terrorism Risk*
Coauthored a study with Professor R. Glenn Hubbard, former chair of the President's Council of Economic Advisers. Study, which was commissioned by numerous insurance trade organizations, focused on the economic impact of the Federal TRIA terrorism legislation and the economic impact of failing to renew the legislation.
- *Class Action v. Allstate*
Consulting expert on damages and other issues relating to the estimation of inherent diminished value that may still be present after a vehicle has been repaired following an accident.
- *Class Action v. American Home*
Damages expert for American Home in a litigation involving alleged misreporting of certain types of claims to the Workers' Compensation Insurance Rating Bureau (WCIRB) of California.
- *Class Action v. State Compensation Insurance Fund*
Damages expert for plaintiffs in a litigation involving claims estimation and reserving practices of State Compensation Insurance Fund in California.

- *Class Action v. Knights of Columbus*
Economic expert for the Knights of Columbus in a major sales practices litigation involving over 500,000 policyholders. Estimated the damage to policyholders under alternative theories of liability, including development of computer-based policy performance models.
- *Various Confidential Class Action Litigations v. Mutual Life Insurance Companies*
Consulting expert in the analysis of sales practices for four major class action litigations involving between 100,000 and 3.6 million policyholders. Work included estimating the incidence of various allegations, evaluating the financial exposure and recommending alternatives to management and directors.
- *Insurance Modal Premium Litigation*
Consulting expert on issues relating to the estimation of potential damages exposure for modal premium litigation. Prepare preliminary analyses of economic costs and benefits of modal premium payments on policyholders.
- *Confidential Liability Insurance Coverage Litigation*
Economic expert in insurance coverage litigation. Managed the abstracting and statistical analysis of information contained in paper records useful for determining the possible insurance coverage.
- *Confidential Disability Insurance Sales Practices Litigation*
Consulting expert for issues related to the sale and product performance of individual disability insurance policies. Designed and implemented large data abstracting effort for the insurance company defendant and assisted in the development and implementation of a settlement for tens of thousands of policyholders.
- *Confidential Mortgage Insurance Litigation*
Consulting expert in a large litigation involving primary mortgage insurance. Analysis of issues involving the provision of various types of services and insurance products.
- *Health Insurance Redesign Litigation*
Consulting expert in the analysis of a major health insurance benefit redesign program. Analysis of various issues associated with estimating damages and developing overall damages models.
- *Confidential Insurance Coverage Litigation Involving Toxic Waste Cleanup Costs*
Consulting expert in the analysis of the allocation of toxic waste cleanup costs across various insurance companies. Developed a sophisticated model to predict the allocation behavior of the claimant under alternative scenarios. Assisted client personnel and counsel in modeling the impact on the client insurance company under different scenarios to assist in litigation and settlement negotiations.
- *Class Action v. Ohio National*
Economic expert for Ohio National in a major class action litigation involving over 100,000 whole life and universal life policies. Estimated the incidence of various allegations, evaluated financial exposure, presented recommendation to management and outside counsel, and developed models to project ultimate class member “take rates” for particular forms of relief.
- *Arroyo v. Alexander & Alexander*
Damages expert in a sales practices case involving the sale and subsequent performance of a universal life insurance policy. Analyzed exposure and damages.

- *Life Insurance/Pension Program Litigation*
 Consulting and testifying expert in a complex sales practices case involving the sale of universal life insurance policies used to help fund a pension program for a large trade association. Analysis assisted counsel in determining exposure and damages.
- *Morris v. Fremont Life*
 Consulting expert to assist in evaluating sales practices of an insurance agent selling an annuity product.
- *Archuletta v. Fremont Life*
 Consulting expert to assist in refuting damages claims put forward by the plaintiff's expert regarding the sale and performance of a Universal Life insurance policy.

Finance and Securities

- *Securities Litigation*
 Consulting expert on numerous issues in a securities matter involving allegations of omissions related to a large IPO.
- *Securities Litigation*
 Consulting expert on numerous issues in a securities matter involving allegations of omissions and misleading financial guidance.
- *Confidential Investigation*
 Consulting expert on finance and accounting issues for US Department of Justice (DOJ) in matter involving food stamp utilization.
- *Fischer v. Fischer Investment Return Analysis*
 Testifying expert on the expected rates of investment return for a diversified portfolio of investments.
- *Confidential Mortgage Litigation*
 Consulting expert in a matter involving the financial performance of a program for reducing the term and interest amount paid on a mortgage.
- *Confidential Investment Return Litigation*
 Testifying expert in a confidential arbitration involving the expected rates of investment returns on different assets classes into the future.
- *Class Action Securities Litigation (Confidential)*
 Consulting expert on loss causation issues in a large bondholder securities case.
- *Class Action Securities Litigation (Confidential)*
 Consulting expert on loss causation issues in a large securities case.
- *Business Interruption (Confidential)*
 Consulting expert in a case involving business interruption for a finance and securities firm.
- *Mortgage Securities Litigation (Confidential)*
 Consulting expert in a class action litigation alleging that the financial performance of mortgage securities were adversely affected by poor underwriting and appraisals.

- *Securities Derivative Litigation (Confidential)*
Consulting expert in a derivative litigation alleging that an acquisition failed to adhere to appropriate corporate governance policies.
- *Confidential Cash-Balance Pension Litigation*
Consulting expert in a litigation involving the damages calculation for a class of cash balance pension participants who terminated prior to retirement.
- *Confidential CDO Litigation*
Consulting expert in a litigation involving the valuation, financial performance, and default history of various collateralized debt obligations.
- *Confidential Securities Litigation*
Consulting expert in a 10b-5 securities litigation.
- *Confidential Tax Shelter Litigation*
Consulting expert in a tax litigation matter for the State of California analyzing the economic basis for an identified series of transactions.
- *Confidential Securities Class Action*
Consulting expert in large securities class action matter involving allegations of failure to provide accurate financial guidance.
- *Stock Option Backdating Litigation*
Consulting expert on stock option backdating matter.
- *Portfolio Diversification*
Consulting expert on issues relating to portfolio diversification in a large trust.
- *Stock Option Backdating Litigation*
Consulting expert on stock option backdating matter in private securities litigation.
- *Confidential SEC Investigation*
Consulting expert on a Securities and Exchange Commission (SEC) investigation relating to reinsurance disclosures.
- *Confidential Mutual Fund Litigation*
Consulting expert on litigation related to late trading of international mutual funds.
- *Williams Communication Securities Litigation*
Consulting expert on 10b-5 litigation alleging audit failures led to stock decline. Case dismissed.
- *Class Action v. Ernst & Young*
Consulting expert on 10b-5 litigation alleging audit failures led to stock decline. Case went to verdict with a no liability verdict for client, Ernst & Young.
- *Confidential Securities Litigation*
Consulting expert assisting academic affiliate in analysis focused on the reasonableness of company disclosures based on internal company budgets and forecasts.

- *Confidential Securities Litigation*
Consulting expert for counsel in securities litigation focused on company disclosures.
- *IRS v. Center Apartments*
Consulting expert assisting Professor Steve Grenadier in the analysis of proper commercial apartment mortgage interest rates.
- *Class Action v. Major Investment Bank*
Consulting expert analyzing the impact of releasing allegedly fraudulent investment information on the stock price of two small software companies for a 10b-5 securities litigation.
- *Class Action v. Conseco*
Consulting expert analyzing the value of a proposed settlement involving universal life crediting rates. Assisted expert in the financial evaluation of the value of the proposed settlement using interest rate simulation models.
- *IRS v. Major Retail Chain*
Consulting expert in defense of a major retail chain. Provided assistance in evaluating various expert reports involving the economic consequences of the purchase of a particular investment.
- *In re: NASDAQ Market Maker Antitrust Litigation*
Consulting expert analysis of millions of stock transactions for seven different NASDAQ market makers facing allegations of conspiracy and price-fixing.

Commercial Damages

- *State of Washington v. Comcast*
Testifying expert in litigation involving allegations related to the provision of repair services to cable TV customers.
- *Confidential Regulatory Breach Litigation*
Consulting expert on damages and accounting issues in litigation involving a breach of federal regulations in the retail food industry.
- *Confidential Employment Breach Arbitration*
Consulting expert on damages in an arbitration involving a breach of employment obligations.
- *Confidential Breach of Contract Arbitration*
Testifying expert on damages in litigation involving a breach of contract for a health care claims administration company.
- *Confidential Breach of Contract Arbitration*
Testifying expert on damages in litigation involving a breach of contract for a laboratory billing company.
- *Metzner v. Permanente Medical Group*
Testifying expert on damages in litigation involving allegations of wrongful termination.
- *Confidential Commercial Airline Litigation*
Testifying expert on damages and statistical issues in litigation involving the payment of fees for interrupted travel.

- *2880 Stevens Creek v. Blach Construction*
Testifying expert on loss-of-use damages in litigation involving construction defects.
- *Polteco v. Tecslut*
Testifying expert on damages in litigation involving the failure of specialized machinery in a manufacturing operation.
- *Confidential Auto Dealership Litigation*
Analysis of liability and damages issues in litigation involving auto dealership sales practices.
- *F&A Restaurant Group v. Shepard and Reyes*
Analysis of damages relating to the sale of a restaurant. Provided arbitration testimony.
- *US Unwired v. Sprint*
Assisted Analysis Group affiliate Robert Hall in the damages analysis associated with the change in status of Sprint's affiliate, US Unwired. Case settled after trial testimony had been presented.
- *Confidential Enterprise Software Litigation*
Assisted Analysis Group affiliate in the damages analysis associated with loss of business in the enterprise software market.
- *Her Associates v. Kaiser*
Damages expert for defense in litigation related to consulting firm's damages claim.
- *General American v. KPMG*
Damages expert for plaintiffs in litigation related to auditor's alleged obligation to disclose certain financial instruments.
- *Creative Artists v. County of Santa Clara*
Damages expert for defense in litigation related to the cancellation of musical events at facilities owned by the County of Santa Clara.
- *Class Action v. Ford Credit*
Damages expert for plaintiffs analyzing the costs and charges associated with late fees on consumer auto leases.
- *Bar None v. The Duncan Group, January*
Damages expert for defense analyzing damages associated with the failed efforts to develop a software program to be used in automating the subprime auto lending business.
- *Coram v. Aetna*
Consulting expert for defense analyzing the damages associated with a home health care contract that experienced higher costs than anticipated. Supported industry expert in the cost analysis.
- *Confidential Breach of Contract Litigation*
Consulting expert for defense analyzing the damages associated with the failed joint venture development of a removable storage device for personal computers. Supported academic expert in the analysis of damages.

- *Bourns v. Raychem*
Consulting expert for defense analyzing damages associated with the monopolization of the market for primary lithium battery safety devices. Supported academic experts in the analysis of damages.
- *Procter & Gamble v. Amway*
Consulting expert for plaintiff analyzing the impact of disparaging comments and rumors on the sales of Procter & Gamble products. Supported academic experts in the analysis of primary and secondary data sources and the development of surveys and laboratory experiments to test the impact of rumors on consumer behavior.

Valuation / Intellectual Property

- *Confidential Stock Appraisals*
Consulting expert in the appraisal of the stock value for several publicly traded companies that have been challenged in Delaware Chancery Court.
- *Dell Stock Appraisal*
Consulting expert in the Delaware appraisal of Dell's shares arising from the October 2013 leveraged buyout of Dell's public shareholders.
- *Confidential International Arbitration*
Testifying damages expert in dispute involving alleged breach of licensing and joint development agreements.
- *Confidential Business Valuation*
Designated expert in a business valuation for a medical practice.
- *Confidential Patent Litigation*
Consulting expert in litigation involving PC networking technology.
- *Confidential Patent Litigation*
Consulting expert on determination of royalty amounts in a confidential semiconductor patent litigation.
- *Confidential High-Technology Manufacturing Company Valuation*
Valuation expert analyzing economic factors associated with the value of a closely held manufacturer of specialized high tech components for defense applications.
- *Confidential Beverage Distributor Valuation*
Valuation expert analyzing the value of the large beverage distributor.
- *Confidential Patent Infringement Litigation*
Consulting expert on reasonably royalties and damages in the semiconductor industry.
- *Appaloosa Interactive Corporation v. Stephen Friedman and Related Cross-Actions, 2007*
Valuation and damages expert in the video game development industry.
- *Confidential Insurance Company Valuation*
Valuation expert analyzing the value of a private auto insurer for a Delaware valuation matter.

- *Carrino v. Carrino*
Valuation expert analyzing the value of an investment management firm. Provided trial testimony.
- *Confidential Valuation*
Valuation expert analyzing the value of capital contributions to a series of jointly invested real estate transactions.
- *Confidential Company Valuation*
Valuation expert analyzing a privately held health care provider.
- *Confidential Company Valuation*
Valuation expert analyzing a privately held consulting firm.
- *Confidential Software Distribution Dispute*
Damages expert in an arbitration involving software distribution.
- *Capo v. Diopics, January*
Intellectual property damages expert in a trade dress case involving protective sunglasses.
- *Arthur Stockton v. Fidelity & Deposit*
Analysis of the value of an investment management firm and any damages related to the payment of claims by the insurer.
- *Confidential Company Valuation*
Valuation expert analyzing a privately held construction firm.
- *Redlands Insurance Company v. Edward Wolkowitz*
Valuation expert for plaintiff analyzing the valuation and rating analysis of Redlands Insurance Company, a property and casualty insurer.
- *Confidential Catastrophic Insurance Company Valuation*
Consulting expert for defense analyzing the valuation methodology used by the plaintiffs in the valuation of a catastrophic risk insurance modeling company.
- *Trigon v. United States of America*
Valuation expert for defense analyzing the valuation methodology used by plaintiffs' expert for intangible assets.
- *Synbiotics v. Heska, November*
Damages expert for defense in a patent infringement case involving antibody tests for animal diseases.
- *Air Products v. ATMI*
Damages expert in a patent infringement case involving gases used for semiconductor manufacturing.
- *Confidential Telecommunications Equipment Trade Secret Litigation*
Consulting expert analyzing the potential damages from the sale of telecommunications equipment allegedly containing trade secrets. Supported Analysis Group expert in the analysis of relevant data and the development of reasonable royalty damages estimates and potential lost profits.

- *Bingo Card Minder v. Gametek*
Consulting expert analyzing reasonable royalties for a handheld computer-based consumer product. Supported Analysis Group expert in the analysis of relevant data and development of reasonable royalty percentages.

Health Care

- *Confidential Provider Network Dispute*
Consulting expert analyzing issues associated with the development and maintenance of a provider network.
- *Dual Diagnosis Treatment Center, et al. v. Health Net*
Consulting expert in a matter involving the provision of addiction care services.
- *CEP America – California v. Heritage Provider Network*
Testifying expert in a matter involving the determination of reasonable value for physician services.
- *CSNI v. Blue Shield*
Testifying expert in a matter involving the determination of reasonable value for physician services.
- *Confidential Arbitrations*
Consulting and testifying expert in matters involving reasonable value rates.
- *Confidential Addiction Care Analysis*
Consulting expert in a matter involving the provision of addiction care services.
- *Confidential Investigation of Charity Care*
Consulting expert in a matter involving the provision of hospital charity care.
- *NorthBay Healthcare Group v. Blue Shield*
Testifying expert in a matter involving the determination of reasonable value for hospital services.
- *YDM Management Inc. v. Blue Shield*
Testifying expert in a matter involving the determination of reasonable value for physician services.
- *San Jose Neurospine v. Blue Shield*
Testifying expert in a matter involving the determination of reasonable value for physician services.
- *Bodner, et al. v. Blue Shield*
Testifying expert in a matter involving the disclosures and financial payments for various types of physician services.
- *Confidential Payor-Provider Disputes*
Economic expert in litigation over payment for emergency and post-stabilization care.
- *Confidential Payor-Provider Dispute*
Economic expert in arbitration over payment for emergency and post-stabilization care.
- *Des Roches, et al. v. Blue Shield and Magellan*
Class certification expert for Blue Shield in a matter involving the use of guidelines for certain behavioral health services.

- *Confidential Hospital Payment Dispute*
Economics testifying expert in a case involving payments for hospital services.
- *Confidential Hospital Payment Dispute*
Economics testifying expert in a case involving payments for hospital services.
- *Confidential Laboratory Payment Dispute*
Economics testifying expert in a case involving payments for laboratory services.
- *Goel v. Blue Shield*
Economics testifying expert in a case involving the determination of reasonable value for emergency department cardiology services.
- *Confidential Hospital Payment Dispute*
Economics and statistical expert in a litigation involving the determination of payment levels associated with disputed status of certain payor groups.
- *NCAA Concussion Litigation*
Economics expert in litigation involving the adequacy of funding for a medical monitoring program for a class of NCAA athletes.
- *Confidential Health Care Litigation*
Consulting expert in a matter involving a dispute over the classification of various health care expenses related to deductible and maximum out-of-pocket expenditures.
- *Confidential Health Care Arbitration*
Testifying expert in a dispute between a payor and provider involving payment levels and business practices.
- *Martin, et al. v. Blue Shield*
Testifying expert on class certification issues in a matter involving plan-level premium change calculations for individual health insurance policies.
- *Prime v. Kaiser*
Damages expert in dispute involving business practices and claims payment issues.
- *Confidential Health Care Litigation*
Damages expert in a dispute involving group health insurance.
- *Confidential Class Action Litigation*
Consulting expert on damages issues in a dispute over coverage issues for certain types of individual health insurance policies.
- *Confidential Payor/Provider Dispute*
Consulting expert on damages issues in a dispute between a payor and provider involving payment terms and allowed services.

- *Confidential Arbitration*
Expert on damages issues in a dispute between a payor and provider affecting enrollment and profitability for a large Medicare managed-care program and other patient programs.
- *Class Action v. Wellpoint*
Expert on class certification matters in a class action alleging improper termination of a health insurance company.
- *Confidential Arbitration*
Expert on damages issues in a dispute between a payor and provider regarding a change in payment methodology.
- *Clark v. Blue Shield*
Expert for defense assisting in the economic analysis of policy rescission.
- *Confidential Arbitration*
Expert on damages calculation in a dispute between a health insurer and a provider of supplemental insurance benefits.
- *Confidential Hospital Association*
Consultant assisting with developing economic models and developing legislative for Medicaid financing arrangements among hospitals.
- *Paul v. Blue Shield*
Expert for defense assisting in the economic analysis of policy rescission.
- *Simoes v. Blue Shield*
Expert for defense assisting in the economic analysis of policy rescission.
- *Hailey v. Blue Shield*
Expert for defense assisting in the economic analysis of policy rescission.
- *Leyra v. Blue Shield*
Expert for defense assisting in the economic analysis of liability for policy rescission.
- *Sutter v. Blue Shield*
Consulting expert for defense assisting in the economic analysis of hospital charges.
- *Various Health Insurance Matters*
Consulting expert for defense assisting in the economic analysis of policy rescissions.
- *Class Action v. Health Insurer*
Consulting expert for defense assisting in the economic analysis of liability for alleged misclassification of patient populations.
- *Missouri Stem Cell Economic Valuation*
Authored a study examining the likely economic impact of possible health research breakthroughs for health care costs in Missouri.

- *California Stem Cell Economic Impact Valuation*
Coauthored a study with Professor Laurence Baker of Stanford examining the likely economic impact of a proposed major health research initiative in California.
- *Health Guideline Analysis*
Consulting expert leading a team of health economists and statisticians in the evaluation of clinical and payment guidelines developed for heart valve replacement surgery.
- *California Attorney General v. Alta Bates/Summit Medical*
Consulting expert analyzing the ability of managed care plans to move patients in response to quality or price incentives. Supported industry expert in developing report and preparing for deposition.
- *Various Hospital Mergers*
Financial expert for various clients analyzing proposed mergers between not-for-profit community hospitals. Estimated the potential efficiencies resulting from the mergers, conducted market research on community needs, and presented findings to management, directors, and outside counsel.
- *Class Action Health Insurance Litigation*
Hired by the nation's largest mediation service to serve as a neutral expert in a litigation involving the calculation of health insurance payments. Worked with experts from both sides and assisted the mediator in bringing the parties to a settlement.

Antitrust and Other Cases

- *Medical Supply Rental*
Consulting expert in antitrust matter alleging antitrust harm and damage related to medical equipment rentals.
- *Slovin, et al. v. Sunrun, et al.*
Testifying expert on class action and data issues in a matter involving allegations of improper telephone sales calls.
- *Lucero v. Solar City*
Testifying expert on class action and data issues in a matter involving allegations of improper telephone sales calls.
- *Solyndra v. Trina, et al.*
Testifying expert on antitrust and damages issues in a matter involving allegations of below-cost pricing for solar panels.
- *Confidential Antitrust Investigation*
Consulting expert on antitrust issues in the automobile industry.
- *US Department of Justice v. Richard Bai*
Testifying expert on antitrust issues in a price-fixing case in the LCD industry.
- *Confidential Antitrust Investigation*
Consulting expert on antitrust issues in a high tech industry.

- *Indirect Purchaser Class Action v. AUO, et al.*
Designated testifying expert on antitrust issues in an alleged price-fixing case in the LCD industry.
- *Korean Fair Trade Commission v. AUO, et al.*
Designated testifying expert on antitrust issues in an alleged price-fixing case in the LCD industry.
- *US Department of Justice v. AUO*
Testifying expert on antitrust issues in price-fixing case in the LCD industry.
- *Confidential Antitrust Investigation*
Consulting expert on antitrust issues in a high technology industry.
- *Confidential Predatory Pricing Litigation*
Consulting expert on litigation related to antitrust claims in the replacement auto parts industry.
- *Confidential Private Antitrust Litigation*
Consulting expert on litigation related to antitrust claims in the building construction industry.
- *Regulatory Investigation*
Consulting expert for government regulatory body investigating allegations of consumer overcharges.
- *Class Action v. Noranda and DuPont*
Consulting expert for defense assisting in the economic analysis of liability for alleged antitrust violations affecting sulfuric acid in the United States.
- *Class Action v. Microsoft*
Consulting expert for defense assisting in the economic analysis of antitrust liability and damages issues in a series of price overcharge litigations. Assist various academic affiliates, including Professor Robert Hall.
- *Neon v. BMC Antitrust Litigation*
Consulting expert for plaintiffs analyzing antitrust violations in the sale of computer software for large computer databases. Supported academic affiliate expert in the analysis of relevant data and development of damages estimates.
- *CFM v. Dainippon Screen Mfg. Co.*
Consulting expert for defense analyzing the potential monopolization by CFM of the semiconductor cleaning market. Support academic affiliate, Professor Robert Hall.
- *Proposed Merger of WorldCom and Sprint*
Consulting expert assisting in the economic evaluation of the proposed merger between WorldCom and Sprint. Evaluate issues relating to market share and pricing of residential long distance services.

TEACHING

- | | |
|---------|---|
| 1994–96 | Teaching Fellow, <i>Analytic Methods</i> , Kennedy School of Government, Harvard University |
| 1994–96 | Instructor, <i>Economics Summer Program for Mid-Career Graduate Students</i> , Kennedy School of Government, Harvard University |
| 1989–90 | Teaching Assistant, <i>Statistics</i> , Kennedy School of Government, Harvard University |

PUBLICATIONS AND REPORTS

“Presentation of Econometric Analyses,” with Samuel Weglein, in *Econometrics: Legal, Practical, and Technical Issues*, published by the American Bar Association (2014)

“Risk Management and the Economic Impact of Terrorism,” with Peter Hess, in *Business Continuity and Homeland Security, Volume 1*, edited by David H. McIntyre and William I. Hancock, Edward Elgar Publishing (2012)

“Taming a Whale Lurking in Pension Financing,” *Pensions & Investments* (August 9, 2010)

Interim Economic Impact Review, with Laurence Baker, CIRM (California Stem Cell Agency) (October 10, 2008)

Winning Initiative Campaigns with Economic Analysis, Campaigns & Elections, 39 (February 2006)

“The Economic Effects of Federal Participation in Terrorism Risk,” with R. Glenn Hubbard and Peter Hess, *Risk Management and Insurance Review*, Vol. 8, No. 2, 177–209 (2005)

Some Economic Implications of State Stem Cell Funding Programs, with Lawrence Baker, prepared for “States and Stem Cells: A Symposium on the Policy and Implications of State-Funded Stem Cell Research, Woodrow Wilson School, Princeton University (April 15, 2005)

Health Analysis of the Potential Benefits of SCNT Stem Cell Research and Therapies in Missouri: Patient Population and Health Care Costs (February 8, 2005)

The Economic Effect of Federal Participation in Terrorism Risk, with R. Glenn Hubbard (September 14, 2004)

Economic Impact Analysis Proposition 71: California Stem Cell Research and Cures Initiative, with Laurence Baker (September 14, 2004)

“Hospital Consolidation: Optimal Strategy for a Two-Hospital Town,” with John F. Tiscornia, in *Ambulatory Health Care: Case Studies for the Health Services Executive*, edited by Austin Ross and Mary Richardson, Health Administration Press (1996)

PRESENTATIONS

“Modern Strategies & Approaches in Consumer Class Action Suits”, presented on expert witness issues at a continuing education forum for attorneys sponsored by the National Law Journal (November 2012)

“The Subprime Mortgage Crisis and Disclosures: What Went Wrong?”, presented at a webinar continuing education forum for attorneys sponsored by Analysis Group/Economics (July 29, 2008)

“The Subprime Mortgage Crisis and Disclosures: What Went Wrong?”, presented at a continuing education forum for attorneys sponsored by Analysis Group/Economics, San Francisco, CA (June 24, 2008)

“Stock Option Backdating”, presented at a continuing education forum for attorneys sponsored by Analysis Group/Economics, New York, NY (March 21, 2007)

“Stock Option Backdating”, presented at a continuing education forum for attorneys sponsored by Analysis Group/Economics, Menlo Park, CA and San Francisco, CA (November 7, 2006)

“Overview of Stem Cell Legislation”, moderator and presenter at a presentation on implementing California’s stem cell initiative, sponsored by the Food and Drug Law Institute (FDLI), San Mateo, CA (March 9, 2004)

“Challenges to Expert Testimony,” presentation at Law Seminar International Conference, San Francisco, CA (November 5, 2004)

“Federal Terrorism Insurance Panel Discussion,” presentation and panel participant, National Press Club, Washington, DC (October 24, 2004)

“Insurance 101,” presentation on the design and performance of whole life and universal life policies, presented to customer services representatives administering a life insurance sales practices settlement, Ogden, UT (April 27, 1999)

“Antitrust Case Study: NASDAQ Market Maker Litigation,” presented at a continuing education forum for attorneys sponsored by Analysis Group/Economics, Menlo Park and San Francisco, CA (September 15, 1998)

“An Economist’s Perspective on Life Insurance Sales Practices Problems,” presented at the spring meeting of the Society of Actuaries, Maui, HI (June 15, 1998)

“Valuing Intellectual Property in an Age of Employee Mobility,” presented at a continuing education forum for attorneys sponsored by Analysis Group/Economics, Menlo Park and San Francisco, CA (June 9, 1998)

EXPERT DESIGNATION, TESTIMONY, AND REPORTS

March 2020	Expert report in re: <i>Allstate Corporation Securities Litigation</i>
February 2020	Deposition testimony in <i>CEP America – California v. Heritage Provider Network (health insurance payor-provider matter)</i>
January 2020	Arbitration testimony in <i>Confidential Arbitration (DMHC pricing matter)</i>
January 2020	Expert rebuttal report in <i>Confidential Arbitration</i>
January 2020	Expert report in <i>Confidential Arbitration</i>
January 2020	Arbitration testimony in <i>Confidential Arbitration (ownership dispute matter)</i>
January 2020	Arbitration testimony in <i>Confidential Arbitration (physician IPA affiliation matter)</i>
January 2020	Expert deposition in <i>Confidential Arbitration (DMHC pricing matter)</i>
December 2019	Expert report in <i>Confidential Arbitration</i>
December 2019	Expert report in <i>Confidential Arbitration</i>
December 2019	Expert deposition in <i>Confidential Arbitration (ownership dispute matter)</i>

November 2019	Expert rebuttal report in <i>CEP America – California v. Heritage Provider Network</i>
October 2019	Expert declaration in <i>Dual Diagnosis Treatment Center, et al. v. Health Net</i>
July 2019	Expert declaration in <i>CEP America – California v. Heritage Provider Network</i>
July 2019	Expert deposition in <i>Physicians Healthsource Inc., et al. v. Masimo Corp. (TCPA matter)</i>
July 2019	Expert deposition in <i>Empire Land, LLC (bankruptcy matter)</i>
June 2019	Expert deposition in <i>Michael Johnson, et al. v. Comodo Group (TCPA matter)</i>
June 2019	Trial testimony in <i>California Spine and Neurosurgery Institute v. Blue Shield (health insurance payor-provider matter)</i>
June 2019	Arbitration testimony in <i>Confidential Health Care Payment Matter (health insurance payor-provider matter)</i>
May 2019	Expert deposition in <i>California Spine and Neurosurgery Institute v. Blue Shield (health insurance payor-provider matter)</i>
May 2019	Expert deposition in <i>Confidential Health Care Payment Matter (health insurance payor-provider matter)</i>
March 2019	Expert deposition in <i>California Spine and Neurosurgery Institute v. Blue Shield (health insurance payor-provider matter)</i>
March 2019	Expert deposition in <i>Confidential Health Care Payment Matter (health insurance payor-provider matter)</i>
March 2019	Expert deposition in <i>Confidential Health Care Payment Matter (health insurance payor-provider matter)</i>
February 2019	Expert deposition in <i>San Joaquin General Hospital v. Blue Shield (health insurance payor-provider matter)</i>
February 2019	Trial testimony in <i>Northbay Healthcare Group v. Blue Shield (health insurance payor-provider matter)</i>
February 2019	Expert report in <i>Confidential Arbitration</i>
January 2019	Trial testimony in <i>State of Washington v. Comcast (consumer fraud matter)</i>
December 2018	Trial testimony in <i>State of Washington v. Comcast (consumer fraud matter)</i>
December 2018	Expert deposition in <i>Northbay Healthcare Group v. Blue Shield (health insurance payor-provider matter)</i>
November 2018	Expert report in <i>NorthBay Healthcare Group v. Blue Shield</i>
September 2018	Expert report in <i>YDM Management, Inc. v. Blue Shield</i>

September 2018	Expert deposition in <i>YDM, Management, Inc. v. Blue Shield (Health Insurance Payor Provider Matter)</i>
August 2018	Expert declaration in <i>San Jose Neurospine v. Blue Shield</i>
July 2018	Expert rebuttal report and deposition in <i>State of Washington v. Comcast</i>
June 2018	Expert report in <i>State of Washington v. Comcast</i>
June 2018	Trial testimony in <i>San Jose Neurospine v. Blue Shield (health insurance payor-provider matter)</i>
May 2018	Expert report in <i>John H. Larry Jr. v. Rexall, et al.</i>
May 2018	Expert deposition in <i>San Jose Neurospine v. Blue Shield (health insurance payor-provider matter)</i>
February 2018	Expert deposition in <i>Bodner, et al. v. Blue Shield (health insurance pricing matter)</i>
January 2018	Expert declaration in <i>Fort Leavenworth Military Housing v. Ambac</i>
December 2017	Expert deposition in <i>Fort Bliss Military Housing v. Ambac (bond insurance matter)</i>
November 2017	Expert deposition in <i>Slovin, et al. v. Sunrun, et al. (TCPA matter)</i>
November 2017	Expert report in <i>Slovin, et al. v. Sunrun, et al.</i>
October 2017	Expert report on economic and class issues in <i>Surrett, et al. v. Western Culinary Institute</i>
October 2017	Expert deposition on damages issues in <i>Mayumac v. Met Life (disability insurance matter)</i>
October 2017	Expert deposition on class certification issues in <i>Des Roches v. Blue Shield / Magellan (health insurance benefits matter)</i>
October 2017	Expert report on statistical issues in <i>Scott v. Cricket</i>
October 2017	Expert report in <i>Fort Bliss Military Housing v. Ambac</i>
September 2017	Expert report in <i>Fort Riley Military Housing v. Ambac</i>
September 2017	Expert declaration in <i>San Jose Neurospine v. Blue Shield</i>
August 2017	Expert deposition in <i>Confidential Health Care Payment Matter (health insurance payor-provider matter)</i>
July 2017	Expert deposition in <i>Confidential Health Care Payment Matter (health insurance payor-provider matter)</i>

July 2017	Expert deposition in <i>Starks, et al. v. Geico Indemnity (auto insurance class action)</i>
June 2017	Expert deposition in <i>Confidential Health Care Payment Matter (health insurance payor-provider matter)</i>
May 2017	Expert declaration on class certification issues in <i>Monterey Military Housing v. Ambac</i>
April 2017	Expert declaration on class certification issues in <i>Des Roches v. Blue Shield/Magellan</i>
April 2017	Expert declaration on class certification and data issues in <i>Lucero v. Solar City</i>
April 2017	Expert rebuttal report in <i>Fort Meade Military Housing v. Ambac</i>
March 2017	Expert deposition in <i>Fort Meade Military Housing v. Ambac (bond insurance matter)</i>
March 2017	Expert declaration in <i>Monterey Military Housing v. Ambac</i>
February 2017	Expert testimony in <i>Fort Meade Military Housing v. Ambac (bond insurance matter)</i>
February 2017	Expert declaration in <i>Fort Meade Military Housing v. Ambac</i>
February 2017	Expert declaration in <i>Confidential Hospital Payment Dispute</i>
January 2017	Arbitration testimony in <i>Confidential Health Care Payment Matter (health insurance payor-provider matter)</i>
January 2017	Expert testimony in <i>Fort Bliss Military Housing v. Ambac (bond insurance matter)</i>
January 2017	Expert declaration in <i>Fort Riley Military Housing v. Ambac</i>
December 2016	Expert declaration in <i>Fort Bliss Military Housing v. Ambac</i>
December 2016	Expert declaration in <i>Fort Meade Military Housing v. Ambac</i>
December 2016	Trial testimony in <i>Ben-E-Lect v. Anthem (health insurance design matter)</i>
December 2016	Arbitration testimony in <i>Confidential Health Care Payment Matter (health insurance payor-provider matter)</i>
October 2016	Arbitration testimony in <i>Confidential Breach of Contract Arbitration (TPA valuation matter)</i>
October 2016	Expert report in <i>Confidential Hospital Payment Dispute</i>
September 2016	Trial testimony in <i>Goel v. Blue Shield (health insurance payor-provider matter)</i>
September 2016	Expert declaration in <i>Monterey Military Housing v. Ambac</i>
September 2016	Expert declaration in <i>Bodner, et al. v. Blue Shield</i>

August 2016	Arbitration testimony in <i>Confidential Health Care Payment Matter (health insurance payor-provider matter)</i>
July 2016	Arbitration testimony in <i>Confidential Health Care Payment Matter (health insurance payor-provider matter)</i>
May 2016	Expert Declaration in <i>Monterey Military Housing v. Ambac</i>
April 2016	Deposition testimony in <i>Confidential Health Care Payment Matter (health insurance payor-provider matter)</i>
February 2016	Arbitration testimony in <i>Confidential Health Care Payment Matter (health insurance payor-provider matter)</i>
January 2016	Expert declaration in <i>Bodner, et al. v. Blue Shield</i>
December 2015	Arbitration testimony in <i>Confidential Hospital Payment Dispute</i>
December 2015	Expert deposition in <i>Chinese Drywall Products Liability Litigation</i>
December 2015	Expert declaration in <i>Bodner, et al. v. Blue Shield of California</i>
December 2015	Trial testimony in <i>Metzner v. Permanente Medical Group</i>
October 2015	Expert report in <i>Chinese Drywall Products Liability Litigation</i>
September 2015	Expert deposition in <i>Metzner v. Permanente Medical Group</i>
August 2015	Expert testimony in <i>Confidential Health Care Arbitration</i>
July 2015	Expert deposition in <i>Solyndra v. Trina, et al.</i>
April 2014	Expert report (update) in <i>NCAA Concussion Litigation</i>
January 2015	Expert deposition in <i>Prime v. Kaiser</i>
December 2014	Expert report (update) in <i>NCAA Concussion Litigation</i>
December 2014	Expert deposition in <i>Martin, et al. v. Blue Shield of California</i>
November 2014	Expert testimony in <i>Confidential International Arbitration</i>
September 2014	Expert deposition in <i>Confidential Insurance Matter</i>
July 2014	Expert report in <i>NCAA Concussion Litigation</i>
July 2014	Expert testimony in <i>Confidential Wrongful Termination Matter</i>
July 2014	Expert report in <i>Confidential Disability Insurance Matter</i>

May 2014	Expert report in <i>Martin v. Blue Shield of California</i>
May 2014	Expert declaration in <i>Martin v. Blue Shield of California</i>
December 2013	Expert report in <i>Confidential Airline Litigation</i>
December 2013	Expert testimony in <i>Confidential Investment Return Litigation</i>
December 2013	Expert deposition in <i>Confidential Investment Return Litigation</i>
November 2013	Expert declaration in <i>Long Trust v. Morgan Stanley</i>
November 2013	Expert report in <i>Long Trust v. Morgan Stanley</i>
November 2013	Expert testimony in <i>Confidential Employment Litigation</i>
November 2013	Expert deposition in <i>Confidential Employment Litigation</i>
November 2013	Expert deposition in <i>Katz v. Mass Mutual</i>
October 2013	Expert report in <i>Katz v. Mass Mutual</i>
October 2013	Expert report in <i>Circuit City, et al. v. AUO</i>
October 2013	Summary witness expert testimony in <i>US Department of Justice v. Richard Bai</i>
January 2013	Expert testimony in <i>Confidential Arbitration</i>
January 2013	Expert deposition in <i>Confidential Arbitration</i>
December 2012	Expert declaration in <i>Markocki v. Olde Republic Title</i>
December 2012	Expert deposition in <i>Paul v. Blue Shield of California</i>
June 2012	Expert deposition in <i>Indirect Purchaser Class Action v. AUO</i>
June 2012	Expert deposition in <i>Asbestos Litigation v. Borg Warner</i>
May 2012	Expert report in <i>Indirect Purchaser Class Action v. AUO</i>
April 2012	Expert deposition in <i>2880 Stevens Creek v. Blach Construction Co.</i>
April 2012	Expert deposition in <i>Indirect Purchaser Class Action v. AUO</i>
March 2012	Expert report in <i>Indirect Purchaser Class Action v. AUO</i>
February 2012	Expert testimony in <i>United States Department of Justice v. AUO</i>
February 2012	Expert deposition in <i>Campbell v. MetLife</i>
November 2011	Expert deposition in <i>Cox v. Allstate</i>

October 2011	Expert report in <i>Cox v. Allstate</i>
October 2011	Expert deposition in <i>Class Action v. Wellpoint</i>
October 2011	Expert designation in <i>US Department of Justice v. AUO</i>
October 2011	Expert report in <i>KFTC v. AUO</i>
July 2011	Expert report in <i>Class Action v. Wellpoint</i>
June 2011	Expert report in confidential damages arbitration
November 2010	Expert testimony in <i>Jasmine v. Marvell</i>
October 2010	Expert testimony in <i>US Government v. Jerry Cash</i>
July 2010	Expert deposition in <i>M.E. Fox & Co. Valuation matter</i>
June 2010	Expert designation in <i>M.E. Fox & Co. Valuation matter</i>
May–June 2010	Expert testimony in <i>Polteco v. Tecsalt</i>
March 2010	Expert deposition in <i>Simoos v. Blue Shield</i>
December 2009	Expert designation in <i>Simoos v. Blue Shield</i>
October 2009	Affidavit in <i>Best Buy v. DDR</i>
March 2009	Expert deposition in <i>Hailey v. Blue Shield</i>
March 2009	Expert report in <i>Hausman v. Union Bank</i>
March 2009	Expert report in <i>Perez v. First American Title Insurance Company</i>
March 2009	Trial testimony in <i>Windham v. Cook</i>
February 2009	Expert report in <i>Windham v. Cook</i>
January 2009	Expert designation in <i>Hailey v. Blue Shield</i>
October 2008	Deposition testimony in <i>Pavlov, et al. v. CNA</i>
September 2008	Expert declaration in <i>Pavlov, et al. v. CNA</i>
September 2008	Trial testimony in <i>Freidman v. Sega, et al.</i>
September 2008	Expert report in <i>Freidman v. Sega, et al.</i>
July 2008	Deposition testimony in <i>Freidman v. Sega, et al.</i>

July 2008	Deposition testimony in <i>Best Buy v. DDR</i>
June 2008	Expert report in <i>Best Buy v. DDR</i>
October 2007	Expert designation in <i>Rowlands v. Blue Shield</i>
September 2007	Deposition testimony in <i>Class Action v. CNA</i>
September 2007	Expert report in <i>Class Action v. CNA</i>
May 2007	Deposition testimony in <i>Tronox v. Rio Algom</i>
April 2007	Expert designation in <i>Callil v. Blue Shield</i>
April 2007	Expert designation in <i>Abbott v. Blue Shield</i>
March 2007	Deposition testimony in <i>Leyra v. Blue Shield Life and Health</i>
December 2006	Expert designation in <i>Leyra v. Blue Shield Life and Health</i>
August 2006	Arbitration testimony in <i>F&A Restaurant Group v. Shepard and Reyes</i>
July 2006	Trial testimony in <i>Carrino v. Carrino</i>
July 2006	Deposition testimony in <i>Carrino v. Carrino</i>
February 2006	Arbitration testimony in <i>ART v. Riverdeep</i>
January 2006	Deposition testimony in <i>ART v. Riverdeep</i>
December 2005	Deposition testimony in <i>FFIC v. Cunningham Lindsey</i>
September 2005	Deposition testimony in <i>Barnes & Noble v. DDR (Texas and Kansas)</i>
September 2005	Expert report in <i>Fireman's Fund v. Cunningham Lindsey</i>
September 2005	Expert report in <i>Barnes & Noble v. DDR (Kansas)</i>
August 2005	Expert report in <i>Barnes & Noble v. DDR (Texas)</i>
March 2005	Expert report in <i>Bioport Corporation v. Elan Pharmaceuticals</i>
February 2005	Expert report in <i>Capo v. Dioptics</i>
February 2005	Expert report in <i>Arthur Stockton v. Fidelity & Deposit</i>
September 2004	Deposition testimony in <i>Her Associates v. Kaiser</i>
August 2004	Deposition testimony in <i>CSR v. Lloyds, et al.</i>
June 2004	Expert report in <i>CSR v. Lloyds, et al.</i>

April 2004	Deposition testimony in <i>General American v. KPMG</i>
March 2004	Expert report in <i>General American v. KPMG</i>
March 2004	Deposition testimony in confidential company valuation for marital dissolution.
February 2004	Expert report in confidential company valuation for marital dissolution.
January 2004	Deposition testimony in <i>Her Associates v. Kaiser</i>
January 2004	Expert report in <i>Her Associates v. Kaiser</i>
March 2003	Expert designation in <i>Creative Artist Network v. Santa Clara County</i>
December 2002	Deposition testimony in <i>Redland Insurance Company v. Anthony Choy and Edward Wolkowitz</i>
November 2002	Expert designation in <i>Academy Tent, et al. Class Action v. American Home Assurance</i>
Sept.–Dec. 2002	Trial testimony in <i>A&J Liquor, et al. Class Action v. State Compensation Insurance Fund</i>
September 2002	Deposition testimony in <i>A&J Liquor, et al. Class Action v. State Compensation Insurance Fund</i>
July 2002	Expert witness report in <i>Creative Artist Network v. Santa Clara County</i>
July 2002	Deposition testimony in <i>Redland Insurance Company v. Anthony Choy and Edward Wolkowitz</i>
June 2002	Expert declaration on insurance company valuation in <i>Redland Insurance Company v. Anthony Choy and Edward Wolkowitz</i>
May 2002	Expert declaration on settlement valuation in <i>Class Action v. Knights of Columbus</i>
Jan.–Feb. 2002	Deposition testimony in <i>A&J Liquor, et al. Class Action v. State Compensation Insurance Fund</i>
December 2001	Deposition testimony in <i>Class Action v. Ford Credit</i>
May 2001	Deposition testimony in <i>A&J Liquor, et al. Class Action v. State Compensation Insurance Fund</i>
April 2001	Deposition testimony in <i>Bar None v. The Duncan Group</i>
April 2001	Deposition testimony in <i>Trigon v. United States</i>
January 2001	Deposition testimony in <i>Heska v. Synbiotics</i>

December 2000	Expert declaration in <i>Trigon v. United States</i>
June 2000	Deposition testimony in <i>A&J Liquor, et al. Class Action v. State Compensation Insurance Fund</i>
May 2000	Deposition testimony in <i>Heska v. Synbiotics</i>
July 1999	Appeared in Federal Court on behalf of Ohio National in <i>James A. Wemer, et al. Class Action v. Ohio National</i> (did not provide testimony)
June 1999	Submitted a report on the valuation and fairness of the proposed settlement in <i>James A. Wemer, et al. Class Action v. Ohio National</i>
January 1999	Identified as an insurance liability and damages expert in <i>Arroyo v. Alexander & Alexander</i>
December 1998	Expert declaration in <i>A&J Liquor, et al. Class Action v. State Compensation Insurance Fund</i>
November 1998	Identified as an economic expert in <i>Class Action v. Ohio National</i> litigation
October 1998	Identified as an insurance expert in <i>Morris v. Fremont Life Insurance Company</i>
September 1998	Expert declaration in <i>Class Action v. State Compensation Insurance Fund</i>
April 1998	Deposition testimony in <i>Handicomp, Inc. v. United States Golf Association</i>
February 1998	Rebuttal expert report in <i>Handicomp, Inc. v. United States Golf Association</i> , coauthored with Ronald C. Curhan
February 1998	Expert declaration in <i>Class Action v. State Compensation Insurance Fund</i>
January 1993	Expert testimony on the likely economic impact of the merger on the hospital's operating expenses and capital expenditures in Federal Trade Commission (FTC) administrative hearings, <i>Proposed Merger of Parkview Hospital and St. Mary Corwin Hospital</i> , Pueblo, CO

PROFESSIONAL MEMBERSHIPS

American Economics Association

American Bar Association (non-lawyer member)

Association for Health Services Research

APPENDIX B
DOCUMENTS CONSIDERED

All Analyst Reports Considered

"1Q Wrap: Estimates up, CTL reiterates conviction in ramp," Bank of America Merrill Lynch, May 6, 2015
 "1Q Wrap: The wheels are on; price objective to \$41," Bank of America Merrill Lynch, May 9, 2013
 "1Q15 Preview: More Stability, Growth Next," Morgan Stanley, May 4, 2015
 "1Q15 Quick Comment- Better Costs Drive EBITDA BeatIndustry View: Cautious," Morgan Stanley, May 6, 2015
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EXHIBIT 1
SUMMARY OF CENTURYLINK NON-FINANCIAL OPERATIONAL METRICS
2010-2018

		2010				2011				2012			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
[1]	Total broadband subscribers	2,300	2,288	2,319	2,349	2,403	5,519	5,579	5,655	5,745	5,766	5,810	5,851
[2]	Total access lines ⁶	6,900	6,753	6,613	6,489	6,382	15,057	14,803	14,587	14,379	14,149	13,950	13,751
[3]	Total Prism TV subscribers ⁷								65				106
[4]	Total data centers ⁷								51	51	52	53	54
[5]	Employees			19.7	20.3	20.3	48.4	49.2	49.2	47.9	47.1	46.5	47.0

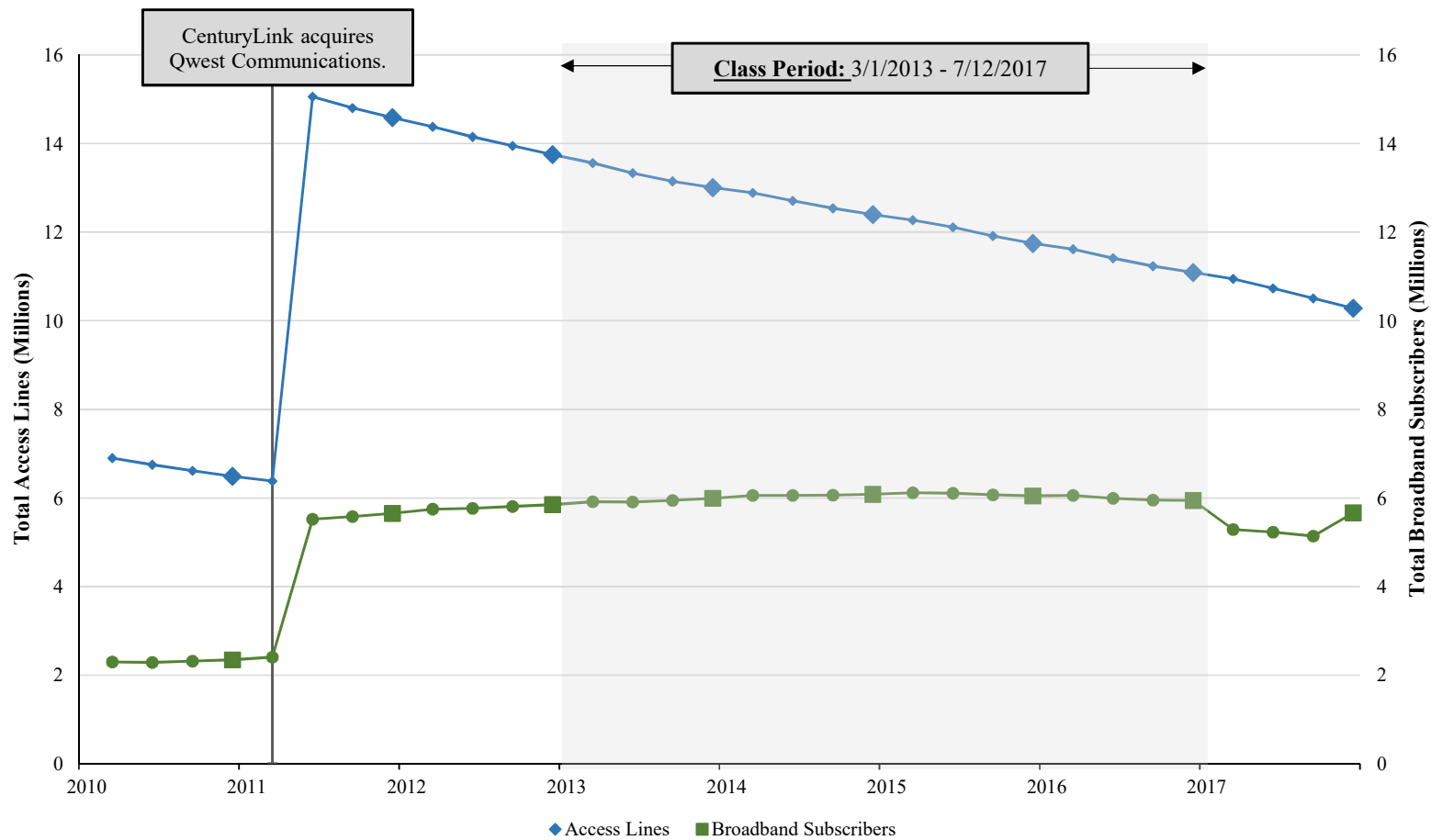
		2013				2014				2015			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
[1]	Total broadband subscribers	5,917	5,909	5,942	5,991	6,057	6,055	6,063	6,082	6,117	6,108	6,071	6,048
[2]	Total access lines	13,561	13,331	13,150	13,002	12,882	12,707	12,537	12,394	12,270	12,109	11,915	11,748
[3]	Total Prism TV subscribers				175		214	229	242	249	258	269	285
[4]	Total data centers	54	55	55	55	56	57	58	58	58	59	59	59
[5]	Employees	46.6	46.9	46.7	47.0	46.5	45.5	45.1	45.0	44.8	44.4	43.1	43.0

		2016				2017				2018			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
[1]	Total broadband subscribers	6,056	5,990	5,950	5,945	5,291	5,226	5,137	5,662	4,986	4,906	4,843	4,800
[2]	Total access lines	11,611	11,413	11,231	11,090	10,945	10,733	10,506	10,282				
[3]	Total Prism TV subscribers	302	311	318	325								
[4]	Total data centers	59	58	58	58								
[5]	Employees	42.8	42.8	42.5	40.0	40.0	40.0	40.0	51.0	50.0	47.0	46.0	45.0

Notes and Sources:

- [1] All reported values are in thousands, except total data centers, which are actual numbers.
- [2] The numbers reflect updated values. That is, if numbers for a quarter were revised in a subsequent quarter, the table shows revised numbers.
- [3] Data are from CenturyLink 10-Q's and 10-K's.
- [4] Blank cells indicate data missing from CenturyLink 10-Q's and 10-K's.
- [5] On April 2011, CenturyLink acquired Qwest Communications International Inc., resulting in an addition of 9.0 million access lines and approximately 3.0 million broadband subscribers.
- [6] Access lines were no longer considered a key operating metric beginning in 2018 and are not reported in CenturyLink 10-Q's and 10-K's after 2017.
- [7] Data centers were sold in November 2016, and Prism TV subscriptions were discontinued in 2018.

EXHIBIT 2
CENTURYLINK, INC.
QUARTERLY ACCESS LINES AND BROADBAND SUBSCRIBERS
2010 to 2017



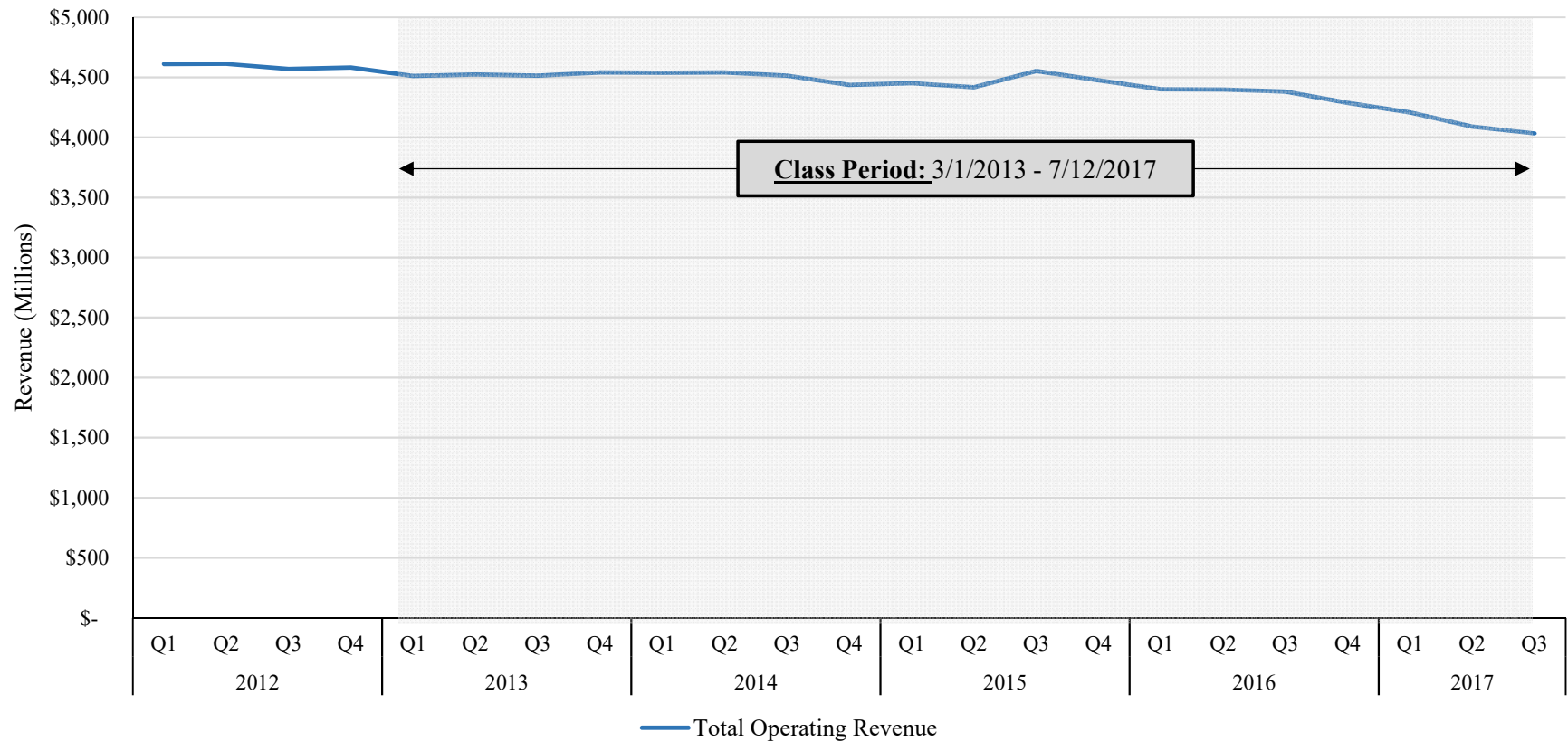
Notes and Sources:

[1] Data are from CenturyLink 10-Q's and 10-K's as most recently reported.

[2] Large markers indicate Q4 data from CenturyLink's 10-K. All other data are from CenturyLink's 10-Q.

[3] On April 1, 2011, CenturyLink completed its acquisition of Qwest Communications International Inc., resulting in an addition of 9.0 million access lines and approximately 3.0 million broadband subscribers.

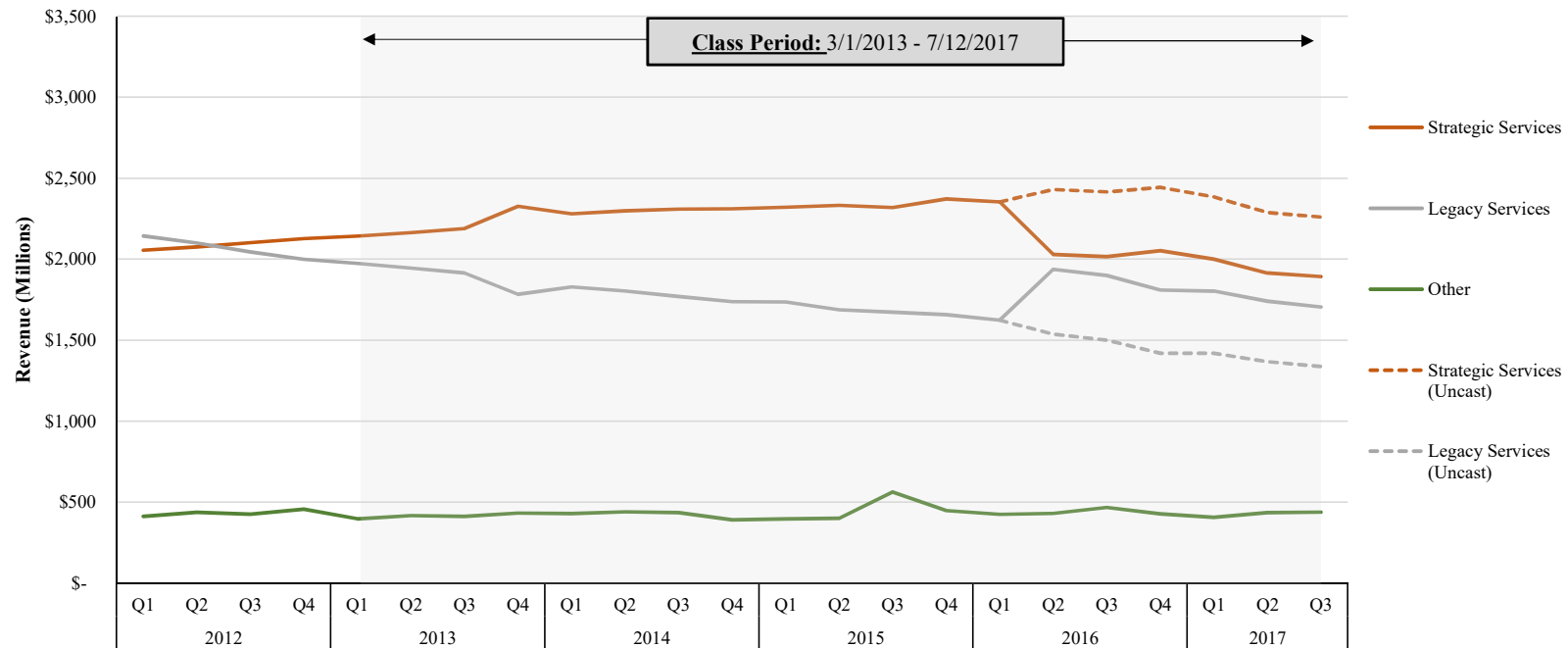
EXHIBIT 3
CENTURYLINK, INC.
QUARTERLY TOTAL OPERATING REVENUE
2012 - 2017



Notes and Sources:

[1] Data are from CenturyLink 10-Q's and 10-K's as most recently reported.

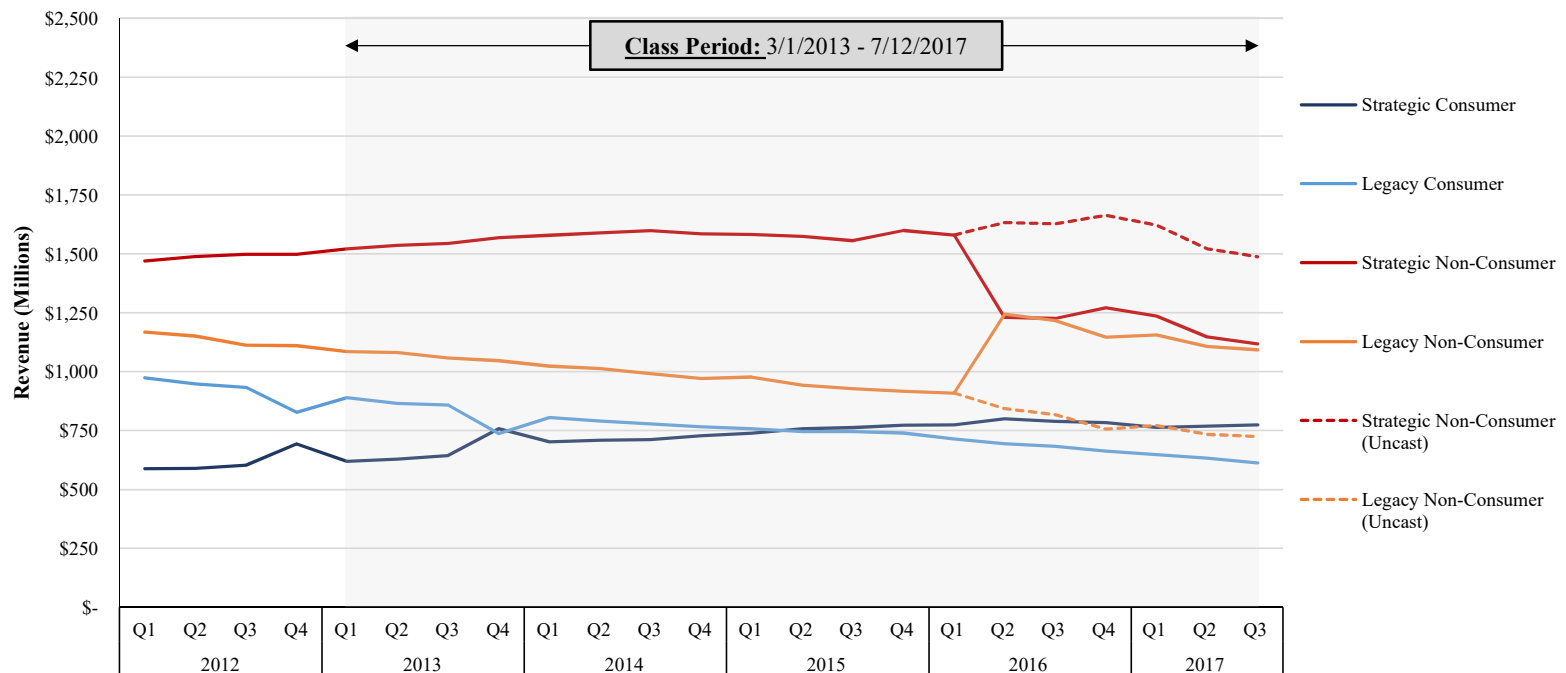
EXHIBIT 4A
CENTURYLINK, INC.
QUARTERLY STRATEGIC VS. LEGACY REVENUE
2012 Q1 - 2017 Q3



Notes and Sources:

- [1] Data are from CenturyLink 10-Q's and 10-K's as originally reported. As CenturyLink does not separately report Q4 numbers, I calculate Q4 revenues by subtracting Q1 through Q3 revenues from the respective full-year totals as reported in the 10-K's.
- [1a] In 2016 Q2, CenturyLink reclassified \$401 million of Strategic Services as Legacy Services. As this reclassification was not in place for Q1, conducting my Q4 calculations would result in 2016 Q4 revenues which are not reflective of CenturyLink's actual performance. To more accurately depict CenturyLink's revenue trends, I adjust the Q1 2016 revenues used in the subtraction so they match the classification of the other quarters as closely as possible. I do this by shifting the same fraction of total revenue from Strategic Services to Legacy Services as was done in Q2 2016.
- [1b] The dotted lines illustrate what CenturyLink's services revenues would have looked like without the reclassification in 2016 Q2. To create these lines, I perform a similar procedure as I did to arrive at the values for Q1 2016 used in the difference above, but in the opposite direction. I shift back a fraction of total revenue from Legacy Services to Strategic Services that is equal to the fraction of revenue that was shifted from Strategic Services to Legacy Services in Q2 2016.
- [2] Strategic Services include Broadband, Private Line, Multi-Protocol Label Switching (MPLS), Managed Hosting, Colocation, Ethernet, Video, VoIP, Managed and Wireless Services.
- [3] Legacy Services have included Local, Long-Distance, Integrated Services Digital Network, Wide Area Network, and Switched Access Services.
- [4] Other includes Data Integration and Other Revenues.
- [5] CenturyLink shifted revenue streams from Strategic Services to Legacy Services, and vice versa, in 2012, Q4 2013, Q1 2015, and Q2 2016.
- [6] Strategic Services, Legacy Services, and Other Services add up to Total Operating Revenues.
- [7] Revenue data for Strategic Services, Legacy Services, and Other Services are not available from Q4 2017 onwards.

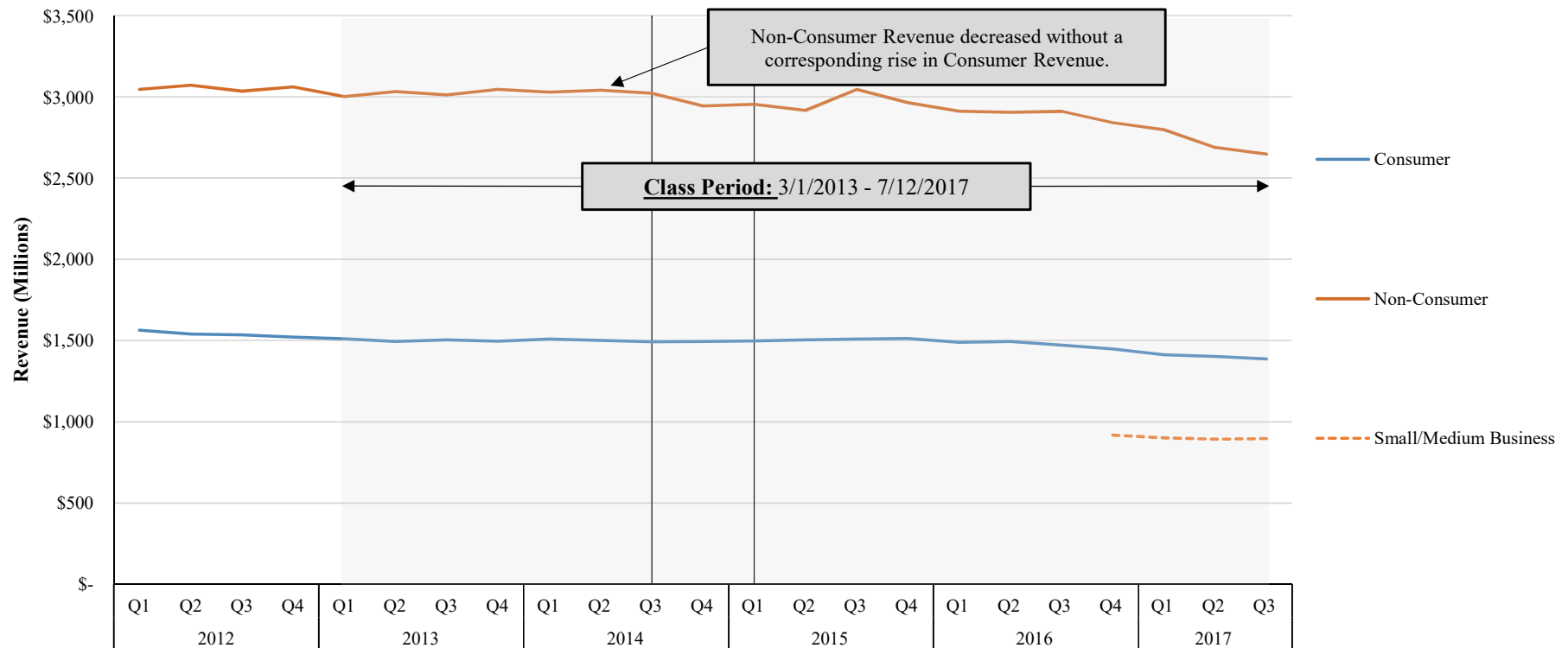
EXHIBIT 4B
CENTURYLINK, INC.
QUARTERLY STRATEGIC AND LEGACY SERVICES REVENUE BY SEGMENT
2012 Q1 - 2017 Q3



Notes and Sources:

- [1] Data are from CenturyLink 10-Q's and 10-K's as originally reported. As CenturyLink does not separately report Q4 numbers, I calculate Q4 revenues by subtracting Q1 through Q3 revenues from the respective full-year totals as reported in the 10-K's.
- [1a] 2012 revenues are taken from subsequent 10-Q's and 10-K's, since these segments were not reported beforehand.
- [1b] In 2016 Q2, CenturyLink reclassified \$401 million of Strategic Services as Legacy Services. As this reclassification was not in place for Q1, conducting my Q4 calculations would result in 2016 Q4 revenues which are not reflective of CenturyLink's actual performance. To make numbers comparable across quarters, I adjust the Q1 2016 revenues used in the subtraction so they match the classification of the other quarters as closely as possible. I do this by shifting the same fraction of total revenue from Strategic Services to Legacy Services as was done in Q2 2016.
- [1c] The dotted lines illustrate what CenturyLink's services revenues would have looked like without the reclassification in 2016 Q2. To create these lines, I perform a similar procedure as I did to arrive at the values for Q1 2016 used in the difference above, but in the opposite direction. I shift back a fraction of total revenue from Legacy Services to Strategic Services that is equal to the fraction of revenue that was shifted from Strategic Services to Legacy Services in Q2 2016.
- [2] Strategic Services have included Broadband, Private Line, MPLS, Managed Hosting, Colocation, Ethernet, Video, VoIP, Managed Services, and Wireless Services.
- [3] Legacy Services have included Local, Long-Distance, Integrated Services Digital Network, Wide Area Network, and Switched Access Services.
- [4] CenturyLink reclassified revenue streams from Strategic Services to Legacy Services, and vice versa, in 2012, Q4 2013, Q1 2015, and Q2 2016.
- [5] Non-Consumer revenue is equal to total quarterly revenue minus Consumer revenue.

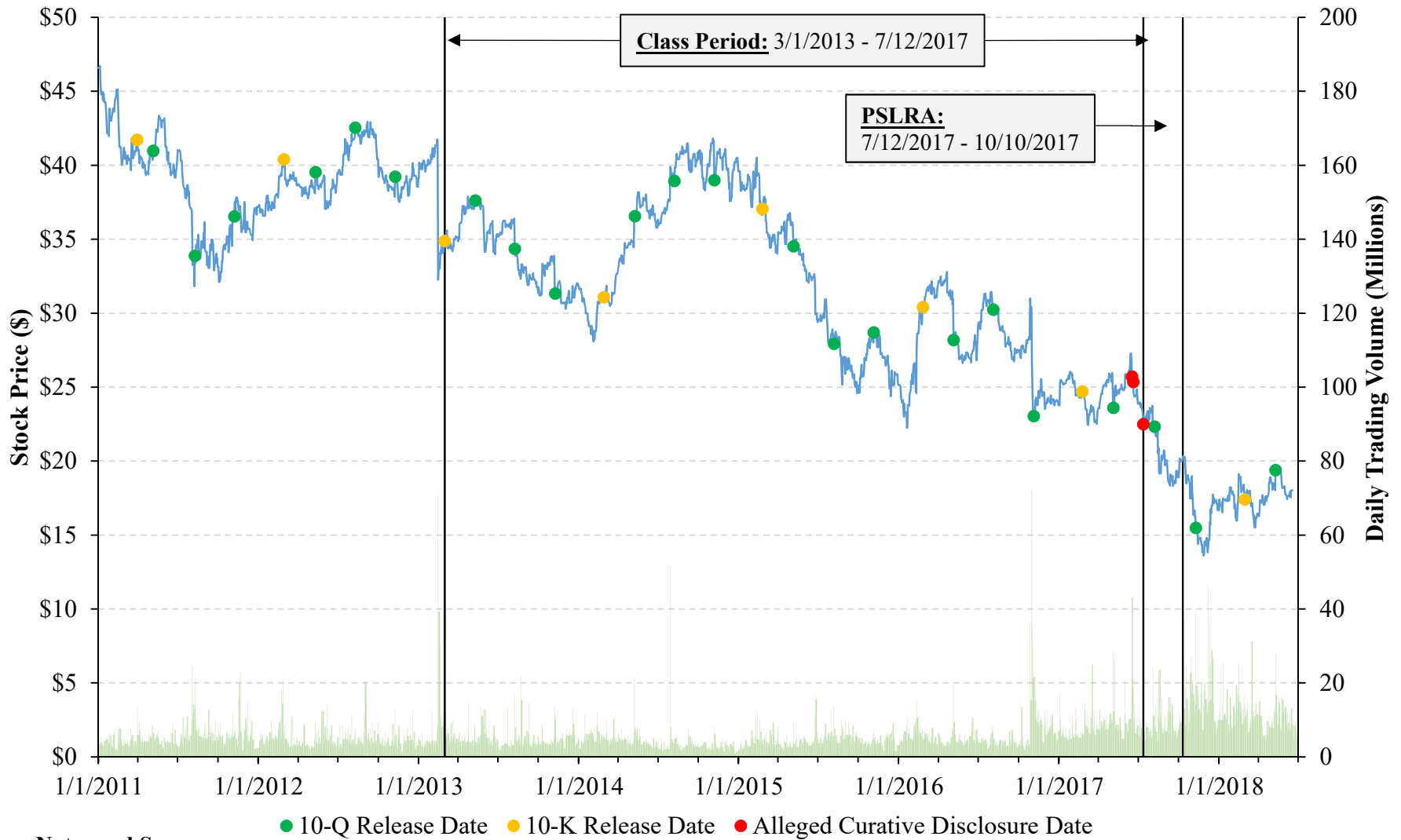
EXHIBIT 4C
CENTURYLINK, INC.
QUARTERLY REVENUE (CONSUMER VS. NON-CONSUMER AND SMALL/MEDIUM BUSINESS)
2012 Q1 - 2017 Q3



Notes and Sources:

- [1] Data are from CenturyLink 10-Q's, 10-K's, and earnings releases, as originally reported. Only Small/Medium Business revenues for Q4 2016 to Q3 2017, and Consumer/Non-Consumer revenues for Q1 2012 to Q4 2012 are taken from subsequent earnings releases, as these segments were not reported beforehand.
- [2] Products and services under the Consumer segment include broadband, local and long-distance voice, and other ancillary services.
- [3] Non-Consumer includes Business and Other segments. Products and services under the Business segment include local and long-distance voice, VPN, private line, Ethernet, information technology, wavelength, broadband, colocation and data center services, managed services, network security, and various other ancillary services.
- [4] Non-Consumer revenue is equal to total quarterly revenue minus Consumer revenue.
- [5] Small/Medium Business revenue is shown as a dotted line to indicate that this is included in the non-consumer segment.
- [6] Small/Medium Business revenues for Q1 2017 to Q3 2017 are reported pro forma for CenturyLink's acquisition of Level 3 Communications, Inc., as this is the only available information.

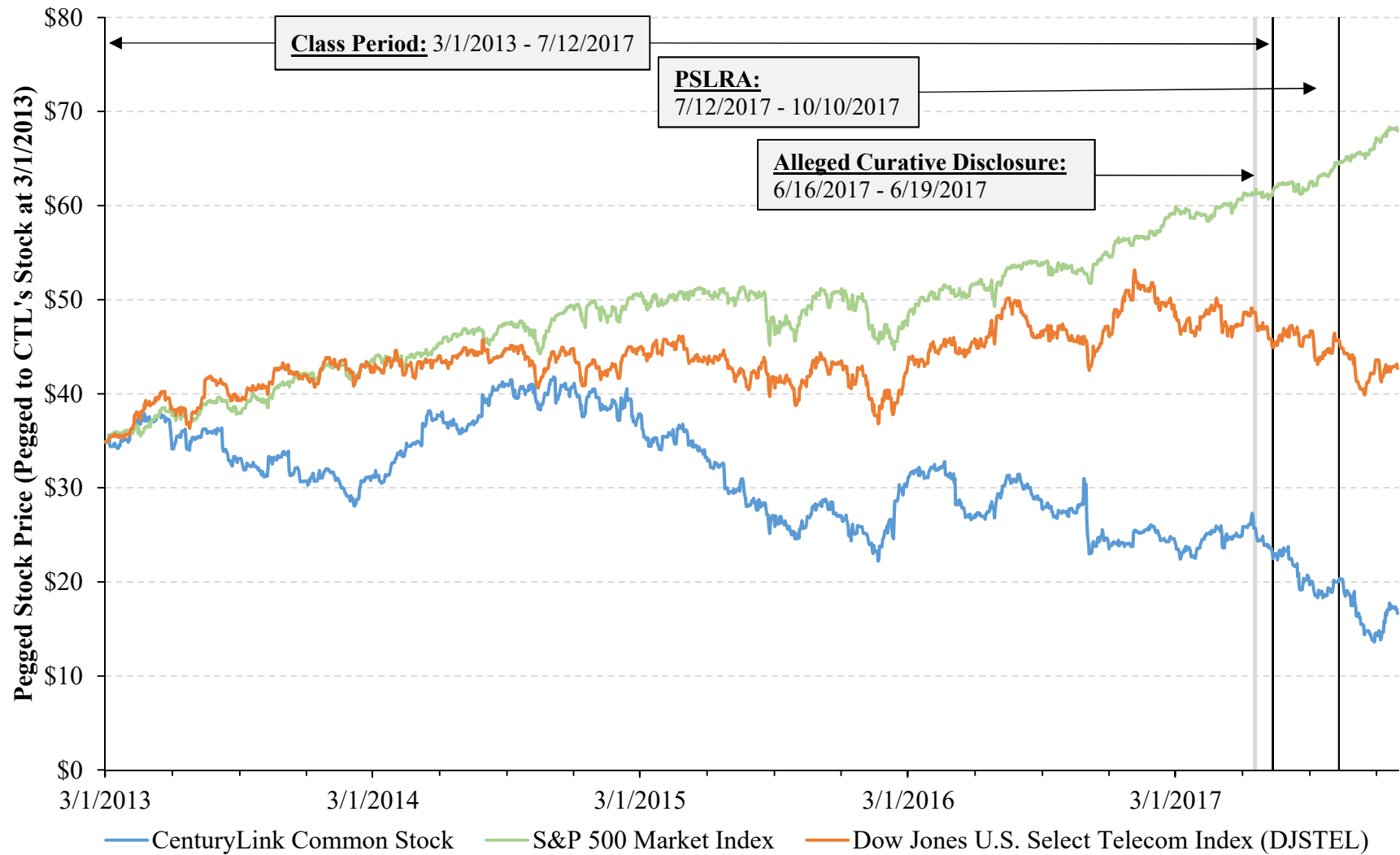
EXHIBIT 5A
CENTURYLINK COMMON STOCK PRICE AND VOLUME
January 2011 - June 2018



Notes and Sources:

[1] Data from Bloomberg.

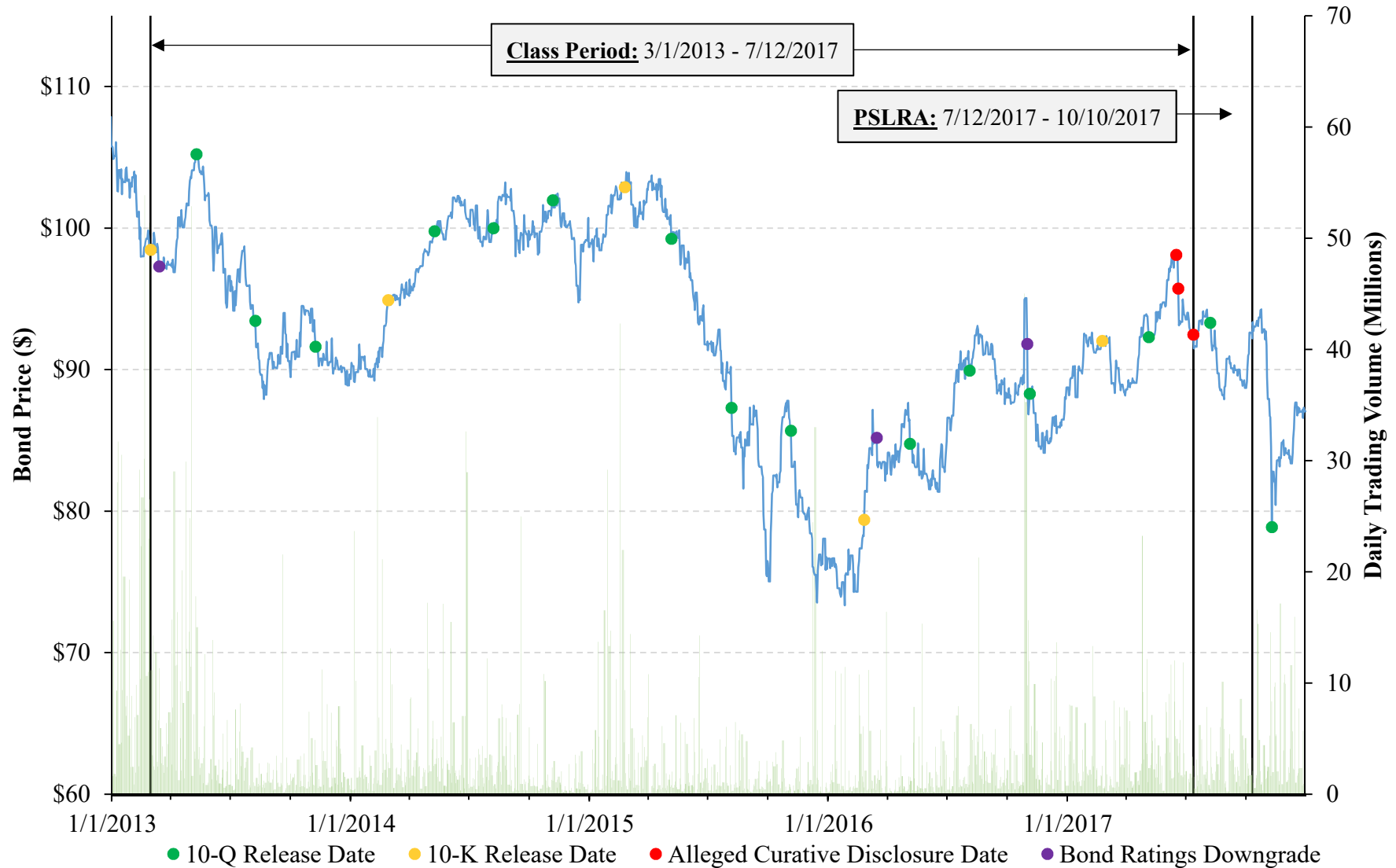
EXHIBIT 5B
CENTURYLINK PRICE CHART WITH PEGGED MARKET AND INDUSTRY INDEX
March 2013 - December 2017



Notes and Sources:

[1] Data from Bloomberg.

EXHIBIT 5C
7.60% SENIOR NOTES DUE 2039 VWAP
January 2013 - December 2017



Notes and Sources:

[1] Data from Dr. Hartzmark's Production, the Securities and Exchange Commission, and Bloomberg.

EXHIBIT 6
COUNTS OF VALUES OF DIFFERENT METRICS REPORTED
IN EARNINGS RELEASE DATA

Quarter	Number of Reported Values¹	Number of Reported Values Increased²	Number of Reported Values Decreased²
2012 Q4	44	23	6
2013 Q2	35	10	9
2013 Q4	41	14	11
2014 Q2	37	14	10
2014 Q4	34	9	12
2015 Q2	33	8	11
2015 Q4	37	16	5
2016 Q2	25	11	5
2016 Q4	34	5	17
2017 Q2	19	0	13
2017 Q4	25	3	2

Notes:

[1] Number of values identified in earnings release for given metrics, time periods, and business segments.

[2] Number of values reported as having increased or decreased relative to a previous quarter or year.

EXHIBIT 7A
EARNINGS RELEASE DATA - 2012, Q4

PR Section	Segment	Metric	Period	Value	Units	Trend	Quote
H/B	All	Op. Rev.	Q	4.58	\$B	down	Achieved fourth quarter operating revenues of \$4.58 billion and full-year
			A	18.4		up	operating revenues of \$18.4 billion, in line with guidance
H/B	All	Adj. Diluted EPS	Q	0.67	\$	up	Achieved Adjusted Diluted EPS of \$0.67 compared to \$0.55 in fourth quarter 2011
H/B	All	Free Cash Flow	Q	610	\$M		Generated Free Cash Flow of \$610 million, excluding special items
H/B	All	High-speed Internet subscribers	Q	5.85	million subscribers	up (q/q)	Ended fourth quarter 2012 with approximately 5.85 million high-speed Internet subscribers ; adding more than 41,000 customers in the fourth quarter.
B	All	Access Line Loss	A	5.7	percent	down	Improved access line loss trend during fourth quarter 2012 to a 5.7% annual decline compared to a 6.6% annual decline in fourth quarter 2011.
B	All	Prism TV Customers	A	115,000	subscribers	up (q/q)	Added more than 10,000 CenturyLink Prism TV subscribers in fourth quarter 2012, ending the quarter with nearly 115,000 subscribers in service.
B	All	Data Centers	Q	54	units	up (q/q)	Opened a new data center in Frankfurt, Germany, bringing total data centers to 54 throughout North America, Europe and Asia, with total sellable floor space of approximately 1.4 million square feet.
B	All	Op. Expenses	Q	3.89	\$B	down	Operating expenses, excluding special items, decreased to \$3.89 billion from \$4.06 billion in fourth quarter 2011. The year-over-year decrease was primarily due to lower personnel-related costs, professional fees and depreciation and amortization expense, which were partially offset by higher colocation and managed hosting expense and network costs.
B	All	Op. Cash Flow	Q	1.91	\$B	up	Operating cash flow (as defined in our attached supplemental schedules), excluding special items, increased to \$1.91 billion from \$1.85 billion in fourth quarter 2011. This increase was primarily the result of lower personnel-related costs and professional fees being partially offset by the impact of the decline in legacy revenues.
B	All	Op. Cash Flow Margin	Q	41.7	percent	up	For fourth quarter 2012, CenturyLink achieved an operating cash flow margin, excluding special items, of 41.7% versus 39.7% in fourth quarter 2011.

EXHIBIT 7A
EARNINGS RELEASE DATA - 2012, Q4

PR Section	Segment	Metric	Period	Value	Units	Trend	Quote
B	All	Adj. Net Income	Q	415	\$M	up	Excluding the items outlined above, CenturyLink's Adjusted Net Income for fourth quarter 2012 was \$415 million compared to Adjusted Net Income of \$343 million in fourth quarter 2011.
B	All	Op. Cash Flow	A	7.7	\$B	up	Operating cash flow, excluding special items, was \$7.7 billion for 2012 compared to \$6.5 billion in 2011.
B	All	Net Income	A	947	\$M	up	Net income, excluding special items, was \$947 million in 2012 compared to \$867 million in 2011.
B	All	EPS	A	1.52	\$	down	Full year 2012 earnings per share, excluding special items, was \$1.52 compared to \$1.62 for the prior year.
B	All	Adj. Net Income	A	1.66	\$B	up	Adjusted Net Income, excluding special items, was \$1.66 billion in 2012 compared to \$1.63 billion in pro forma 2011.
B	All	Adj. Diluted EPS	A	2.67	\$	up	Adjusted Diluted EPS, excluding special items, was \$2.67 in 2012 compared to \$2.64 for pro forma 2011.
B	All	Net Income (GAAP)	Q	233	\$M	up	Under generally accepted accounting principles (GAAP), net income for fourth quarter 2012 was \$233 million compared to \$109 million for fourth quarter 2011, and diluted earnings per share for fourth quarter 2012 was \$0.37 compared to \$0.18 for fourth quarter 2011.
		Diluted EPS (GAAP)		0.37	\$	up	
B	All	Net Income (GAAP)	A	777	\$M	up	Net income under GAAP for full-year 2012 was \$777 million compared to \$573 million for full-year 2011, and diluted earnings per share for full-year 2012 was \$1.25 compared to \$1.07 for full-year 2011.
		Diluted EPS (GAAP)		1.25	\$	up	
B	Regional Markets	Strategic Rev.	Q	914	\$M	up	Strategic revenues were \$914 million in the quarter, a 3.6% increase over fourth quarter 2011.
B	Regional Markets	Total Rev.	Q	2.45	\$B	down	Generated \$2.45 billion in total revenues, a decrease of 3.9% from fourth quarter 2011, reflecting the continued decline in legacy services tempered by the impact of Access Recovery Charges implemented effective July 1, 2012 in accordance with the CAF Order

EXHIBIT 7A
EARNINGS RELEASE DATA - 2012, Q4

PR Section	Segment	Metric	Period	Value	Units	Trend	Quote
B	Wholesale Markets	Strategic Rev.	Q	572	\$M	up	Strategic revenues of \$572 million in the quarter increased slightly compared to fourth quarter 2011, as wireless carrier bandwidth expansion and higher Ethernet sales offset declines in copper-based revenue.
B	Wholesale Markets	Total Rev.	Q	908	\$M	down	Generated \$908 million in total revenues, a decrease of 5.5% from fourth quarter 2011, reflecting the continued decline in legacy revenues primarily driven by the implementation of access rate reductions effective July 1, 2012 in accordance with the CAF Order and lower long distance and switched access minutes of use
B	Wholesale Markets	Fiber Builds Completed	A	4,500	units		Completed more than 4,500 fiber builds in 2012 and expect to complete 4,000 to 5,000 fiber builds in 2013
B	Enterprise markets - network	Strategic Rev.	Q	346	\$M	up	Strategic revenues were \$346 million in the quarter, a 7.8% increase over fourth quarter 2011, driven by strength in high-bandwidth offerings such as MPLS and Ethernet services. Excluding the impact of private line services, the adjusted growth rate was nearly 13%.
B	Enterprise markets - network	Total Rev.	Q	671	\$M	up	Generated \$671 million in total revenues, an increase of 5.7% from fourth quarter 2011, reflecting growth in high-bandwidth offerings and data integration revenues.
B	Enterprise markets - network	Recurring Rev. Growth	Q	4.5	percent		Achieved recurring revenue growth of 4.5% year-over-year and the fourth straight sequential quarter of recurring revenue growth.
B	Enterprise markets - data hosting	Op. Rev. Colocation Rev.	Q	292	\$M	up	Operating revenues were \$292 million in the quarter, a 12.7% increase from fourth quarter 2011. Colocation revenues were \$114 million, a 9.6% increase from fourth quarter 2011, and managed hosting revenues were \$120 million, representing a 21.2% increase over the same period a year ago.
B	All	Integration, Severance, and Retention Costs	Q	14	\$M		During fourth quarter 2012, CenturyLink incurred pre-tax integration, severance and retention costs of \$14 million (\$9 million after-tax) related to the Qwest and Savvis acquisitions.

EXHIBIT 7A
EARNINGS RELEASE DATA - 2012, Q4

PR							
Section	Segment	Metric	Period	Value	Units	Trend	Quote
B	All	Run-Rate Synergies	A	480	\$M		CenturyLink ended 2012 with an annualized operating expense synergy run rate of approximately \$480 million from the Qwest acquisition.
G	All	Run-Rate Synergies	A	600	\$M		Based on current expectations, CenturyLink anticipates exiting 2013 with approximately \$600 million in annual run-rate synergies related to the Qwest acquisition.
G	Wholesale Markets	Fiber Builds	A	4,000 - 5,000	units		Completed more than 4,500 fiber builds in 2012 and expect to complete 4,000 to 5,000 fiber builds in 2013
G	All	Op. Rev.	Q	4.46 - 4.51	\$B		
G	All	Op. Cash Flow	Q	1.83 - 1.88	\$B		
G	All	Adj. Diluted EPS	Q	0.67 - 0.72	\$		
G	All	Op. Rev.	A	18.1 - 18.3	\$B		
G	All	Op. Cash Flow	A	7.3 - 7.5	\$B		
G	All	Adj. Diluted EPS	A	2.5 - 2.7	\$		
G	All	Capital Expend.	A	2.8 - 3	\$B		
G	All	Free Cash Flow	A	3 - 3.2	\$B		

Number of Reported Values: 44 **Trend:** 23 Up
6 Down

EXHIBIT 7B**2012 Q4 Earnings Release Analyst Reports Major Themes*****Major Themes***

- CTL's dividend was unexpectedly cut by 25%. Some analysts saw the move as proactive while others remained more skeptical. (4/4)
- In connection with the reduced dividend, there was a planned buyback of 2.0B worth of shares. Analysts had mixed reactions. (4/4)
- EBITDA and EPS were generally in line with expectations, but target prices still declined due to the unexpected cut in CTL's dividend. (3/4)
- Most analysts identified the potential for increased competition from cable and wireless internet services as a risk. (3/4)

Category 1	Category2	Quotations	Report	Date
All	Dividend	CenturyLink reported solid 4Q12 results, but that was overshadowed by an unexpected dividend cut of 25%. The company also instituted a \$2.0B share BB, and management indicated it was actually returning more cash to shareholders with this structure. It won't matter tomorrow. Maintain Buy rating off of substantially lower current price, but PT goes to \$40.	Jffrs	2/14/13
All	Dividend	Dividend cut by 25%.	Jffrs	2/14/13
All	Dividend	CTL cut its quarterly per share dividend to 54 cents, down from 72.5 cents. However, the company did institute a \$2B share buy back program, which expires in February 2015. Management noted that it will be returning more cash to shareholders over the next 2 years under the new structure.	Jffrs	2/14/13
All	Dividend	We downgrade shares of CenturyLink from Overweight to Neutral following the company's revision of its capital allocation strategy, which included a ~25% dividend cut from \$0.725/share to \$0.54/share, as well as a new \$2b share repurchase program to be completed over the next 2 years.	JPM	2/14/13

EXHIBIT 7B

2012 Q4 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Dividend	CTL saw the writing on the wall in 2015, cutting dividend now.	JPM	2/14/13
All	Dividend	With cash taxes in 2015 looming, CTL ripped the band-aid off and did what it believes is inevitable – cutting the dividend by 25% today.	JPM	2/14/13
All	Dividend	In the meantime the company did a 2-year \$2 billion buyback authorization – essentially returning the excess cash flow before the tax hit as buybacks rather than dividend. While we find the discipline admirable (we can't think of another example of this in telecom), the pain for CTL's shareholders is likely to be extreme. With the stock down 13% after hours implying a 6% dividend yield and 11% FCF yield in 2015 we worry that shares could have further to fall before stabilizing, and see no reason shares would quickly rebound.	JPM	2/14/13
All	Dividend	Event	Mcq	2/14/13
All	Dividend	In light of CTL's surprise qtrly. dividend cut to \$0.54 from \$0.725 and slight cuts to our already-below-consensus 2013 FCF estimates, we are downgrading CTL to Underperform from Neutral and cutting our PT to \$33 based on a 6.5% yield on the new dividend rate.	Mcq	2/14/13
All	Dividend	CTL's cut was unexpected and the near-term reaction could be severe, in our opinion. We would not be surprised if CTL saw the low \$30s near-term and while the \$2bn buyback over two years could provide some support; we don't believe it is sustainable beyond '14.	Mcq	2/14/13
All	Dividend	The 25% dividend cut was unexpected. We believe management is being conservative, and despite the cut, the new yield plus a new \$2B buyback plan remain attractive. Trends continued to show progress as the company moves toward revenue stability in 2014.	MS	2/14/13
All	Dividend	Dividend Cut Surprises, Overshadows Buyback	MS	2/14/13

EXHIBIT 7B

2012 Q4 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Dividend	The 2yr, \$2B buyback plan is a positive, improving shareholder return and supporting FCF.	MS	2/14/13
All	Dividend	Dividend remains sustainable, with buybacks providing further support. CenturyLink guidance for 2013 implies a free cash flow payout ratio of ~40%, and remains below 60% as the company becomes a full cash taxpayer in 2015.	MS	2/14/13
All	Guidance and Forecasts	2013 outlook:	Jffrs	2/14/13
All	Guidance and Forecasts	CTL issued 2013 guidance that was largely in line with our estimates. The company projects revenue to be in the range of \$18.1-\$18.3B (versus our est. of \$18.2B, down 0.9% YoY), while operating cash flow is expected to be \$7.3-\$7.5B (versus our est. of \$7.4B)	Jffrs	2/14/13
All	Guidance and Forecasts	Valuation/Risks	Jffrs	2/14/13
All	Guidance and Forecasts	We value CenturyLink shares at \$40 (down from \$45) at 2013 year-end using a discounted cash flow (DCF) valuation.	Jffrs	2/14/13
All	Guidance and Forecasts	We downgrade CenturyLink from Overweight to Neutral and reduce our year end 2013 price target from \$45 to \$38.	JPM	2/14/13
All	Guidance and Forecasts	2013 EBITDA guidance of -4.6% to -2.0% loss in-line with our prior estimate of -2.9% loss, but below consensus, while EPS guidance above estimates on lower depreciation.	JPM	2/14/13
All	Guidance and Forecasts	Management reiterated its 2013 revenue guidance range of \$18.1-18.3b (an -0.5% to -1.5% y/y decline); we model 2013 revenue of \$18.1b, which implies a -1.1% y/y decline for the year, and look for \$4.5b for 1Q13, a -2.1% y/y decline.	JPM	2/14/13

EXHIBIT 7B

2012 Q4 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Guidance and Forecasts	Management issued EBITDA guidance range of \$7.3-7.5b, and we model 2013 EBITDA at \$7.42b, with margin at 40.8%.	JPM	2/14/13
All	Guidance and Forecasts	The company expects its pro forma adjusted diluted EPS range to be \$2.50-2.70, and our new 2013 EPS estimate comes to \$2.63.	JPM	2/14/13
All	Guidance and Forecasts	For 1Q13 we model EBITDA at \$1.87b on 41.5% margin and EPS of \$0.69.	JPM	2/14/13
All	Guidance and Forecasts	2013 EBITDA guidance in-line with our expectation, but below consensus, while EPS guidance above estimates	JPM	2/14/13
All	Guidance and Forecasts	The company issued 2013 guidance range of \$2.8-3.0b, and we look for 2.93b in capex as the company is expected to spend more in order to get to revenue stabilization in 2014. We model capex at \$2.99b for 2013, largely from high levels of spending on fiber to the tower and Prism TV expansion.	JPM	2/14/13
All	Guidance and Forecasts	Earnings and target price revision	Mcq	2/14/13
All	Guidance and Forecasts	We are lowering our 2013 EBITDA estimate to \$7,404m from \$7,475m as guidance was slightly below our previous estimates. TP to \$33 from \$42.50.	Mcq	2/14/13
All	Guidance and Forecasts	Action and recommendation	Mcq	2/14/13
All	Guidance and Forecasts	Although the \$2bn buyback could support shares in the near-term, we believe that the buyback will go away in 2015, and the stock will once again trade at a 7.5% yield in 2015.	Mcq	2/14/13
All	Guidance and Forecasts	Review of structural long-term risks to CTL:	Mcq	2/14/13

EXHIBIT 7B

2012 Q4 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Guidance and Forecasts	Verizon and AT&T management have suggested that wireless internet and phone solutions for rural areas could be the most economically attractive solution to high-speed internet from the viewpoint of the carriers as well as the consumer. While we recognize that the effects of this move are unlikely to be seen until late 2014, we note that even slight incremental revenue erosion will hobble CTL's ability to reach a revenue inflection point in 2014 and to grow revenue and EBITDA beyond 2014.	Mcq	2/14/13
All	Guidance and Forecasts	Required disclosures – valuation and risks	Mcq	2/14/13
All	Guidance and Forecasts	Risks to our price target for CTL include: accelerated access line erosion; lower than expected merger synergies; lack of a share buyback; potential for a dilutive wireless acquisition; increased cable competition; and LTE wireless substitution. An increase in bond yields would also be a negative for CTL shares.	Mcq	2/14/13
All	Other	Key risks include (i) wireless substitution for both voice and data could accelerate with LTE buildout, (ii) cable competition could intensify, (iii) capex could be higher than expected if CTL decides to invest in growth opportunities, and (iv) material increase in dividend tax rates could lower the attractiveness of the high-dividend payout model.	Jffrs	2/14/13
All	Other	Long Term Analysis	Jffrs	2/14/13
All	Other	Through M&A, CenturyLink has transformed itself over the last decade from a rural local exchange operator, highly dependent on regulated revenues to the nation's third largest integrated telecom service provider.	Jffrs	2/14/13
All	Other	Looking for \$2.9b in capex for 2013 and FCF of \$2.9b including the pension contribution.	JPM	2/14/13
All	Other	CenturyLink spent \$877m in capex in 4Q12, exiting 2012 at \$2.85b, 15.6% of revenue. The company issued 2013 guidance range of \$2.8-3.0b, and we look for 2.93b in capex as the company is expected to spend more in order to get to revenue stabilization in 2014. We model capex at \$2.99b for 2013, largely from high levels of spending on fiber to the tower and Prism TV expansion.	JPM	2/14/13
All	Other	Looking for \$2.9b in capex for 2013 and FCF of \$2.9b including the pension contribution	JPM	2/14/13

EXHIBIT 7B

2012 Q4 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Other	CenturyLink has had a successful track record of growth through acquisitions, successful integrations, as well as taking on initiatives to improve revenue trends. However, as the company's revenue stream moves from high margin legacy voice products to lower margin strategic products, we expect margin to be under meaningful pressure.	JPM	2/14/13
All	Other	Increased share in HSI/IPTV or a boost from the economy could drive revenue to the upside	JPM	2/14/13
All	Other	Further deterioration in economic fundamentals could impact revenue to the downside	JPM	2/14/13
All	Other	Competitive pressures in the urban Qwest territories could pose challenges	JPM	2/14/13
All	Other	You can't escape your roots; secular wireline pressures drive an unexpected dividend cut; downgrading to UP	Mcq	2/14/13
All	Other	Our view is that CTL will have to continue to deploy fiber further and further into its network and the higher longterm capex (and full cash tax rates in 2015) will impair the company's ability to meaningfully deleverage.	Mcq	2/14/13
All	Other	Impact	Mcq	2/14/13
All	Other	CTL mgmt. finally threw in the towel on its Investment Grade credit ratings, announcing a change in capital allocation strategy, including a 25% dividend cut and \$2bn buyback program.	Mcq	2/14/13
All	Other	Recent experience with FTR and Alaska is that rural telcos tend to overshoot on the downside following dividend cuts, as income funds and retail investors sell. CTL's cut was unexpected and the near-term reaction could be severe, in our opinion.	Mcq	2/14/13
All	Other	CTL's proposed new capital allocation strategy will increase cash returns to shareholders, but will disappoint yield investors, in our opinion	Mcq	2/14/13

EXHIBIT 7B**2012 Q4 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
All	Other	Upcoming Catalysts	MS	2/14/13
All	Other	Earnings, deal execution, buybacks Raising guidance Continued improvement in revenue trajectory, line loss trends, and broadband adds Integration of Qwest and SAVVIS SAVVIS cross-selling opportunities Aggressive share buybacks (\$2B authorization)	MS	2/14/13
All	Other	Risks	MS	2/14/13
All	Other	Cable competition with 90%+ overlap Macro pressure on enterprise revenue Margin pressure from revenue mix shift Increased regulatory pressure Pension / OPEB obligations Capex Pressure	MS	2/14/13
All	Other	Negative Sector Implications	MS	2/14/13
All	Other	CenturyLink's buyback program and lower stock price also implies that they are unlikely to make major acquisitions in the near term, preferring to invest in organic growth opportunities such as fiber to the tower, IPTV and data center expansion, so potential targets in the alternative carrier space may be affected.	MS	2/14/13
All	Other	Management focused on share buybacks, paying down debt, and organic growth. The board authorized a \$2.0 billion stock repurchase program through February 13, 2015. It is worth noting that CenturyLink has consistently executed on previous buyback authorizations.	MS	2/14/13

EXHIBIT 7B

2012 Q4 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Revenue, Margins, and Profits	Solid results.	Jffrs	2/14/13
All	Revenue, Margins, and Profits	CTL delivered operating 4Q12 revenues of \$4.58B (down 1.5% YoY), in line with our and Street estimates. Operating cash flow was \$1.91B, also in line with our/Street projections. Capex of \$895M was higher than our estimate of \$797M.	Jffrs	2/14/13
All	Revenue, Margins, and Profits	4Q12 Slightly Below Expectations, 2013 Guidance Inline with Our Estimates	JPM	2/14/13
All	Revenue, Margins, and Profits	CenturyLink's 4Q12 results came in somewhat below expectations, with access line losses, HSI adds, and EBITDA coming in slightly below our estimates, while revenue was inline. Management reiterated 2013 revenue guidance of -0.5% to -1.5% y/y decrease, and issued EBITDA guidance of \$7.3-7.5b, inline with our expectation, but below consensus at \$7.56b. Capex guidance range came in at \$2.8b-\$3.0b.	JPM	2/14/13
All	Revenue, Margins, and Profits	4Q revenues in-line but EBITDA weaker	JPM	2/14/13
All	Revenue, Margins, and Profits	Analysis	Mcq	2/14/13
All	Revenue, Margins, and Profits	The only thing that kept from an Underperform rating when we downgraded CTL to Neutral, just two weeks ago (see note) was the 7%+ dividend yield. With the dividend cut, focus will turn to falling EBITDA and FCF in 2014 and 2015.	Mcq	2/14/13
All	Revenue, Margins, and Profits	Fundamental Trends Remain in Place	MS	2/14/13

EXHIBIT 7B

2012 Q4 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Revenue, Margins, and Profits	Though results were slightly below our estimates, they were in-line with guidance and continued to show steady improvement. The revenue decline of 1.5% was ~170bps better Y/Y, and management expects 2013 revenues to decline by -1.5% to -0.5%. Margins improved sequentially and Y/Y, though margin pressure is expected as revenues continue to shift away from high-margin legacy products.	MS	2/14/13
All	Revenue, Margins, and Profits	Impact on our Views	MS	2/14/13
All	Revenue, Margins, and Profits	2013 EPS rises to \$2.71 from \$2.65, due to buybacks and lower D&A.	MS	2/14/13
All	Revenue, Margins, and Profits	Why own CenturyLink?	MS	2/14/13
All	Revenue, Margins, and Profits	We continue to see a strong balance sheet, continued execution on the shift toward more sustainable revenue streams and a disciplined / conservative management team. CenturyLink will likely remain one of the top dividend yields in the S&P500, and investors will further benefit from \$2B in share buybacks over the next 2 years, suggesting an attractive total return.	MS	2/14/13
All	Revenue, Margins, and Profits	Key Investment Debates	MS	2/14/13
All	Revenue, Margins, and Profits	Management guides to EBITDA stabilizing after top line growth in 2014. CenturyLink has realized \$480M of Qwest synergies through 2012 and expects to reach \$600M by the end of 2013, on the way to a \$650M annual run rate. At the analyst day in 2012, management expected EBITDA stabilization to follow revenue growth given the growth businesses are lower margins. We estimate this will happen sometime after 2015.	MS	2/14/13
Business	Guidance and Forecasts	Scenarios	Jffrs	2/14/13

EXHIBIT 7B

2012 Q4 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
Business	Guidance and Forecasts	The company now derives over 60% of its revenues from business and broadband customers. An unanticipated rebound in non-farm payrolls could boost CenturyLink's business revenues faster than we forecast.	Jffrs	2/14/13
Consumer, Business	Guidance and Forecasts	Downside Scenario:	Jffrs	2/14/13
Consumer, Business	Guidance and Forecasts	Wireless substitution may accelerate Cable competition could intensify, particularly on DSL	Jffrs	2/14/13
Consumer, Business	Guidance and Forecasts	Data center and metro fiber comps are expensive:	Mcq	2/14/13
Consumer, Business	Guidance and Forecasts	CTL could pursue inorganic growth through the purchase of a cloud services or colocation company, as it did with Savvis in 2011.	Mcq	2/14/13
Consumer, Business	Guidance and Forecasts	As 2013 guidance demonstrates, consensus 2013 and 2014 EBITDA and FCF estimates are too high, as the company continues to invest in Prism TV and Savvis and high-margin access lines roll off. Although the company has targeted stabilizing revenues and a revenue inflection point in 2014, this has not been demonstrated.	Mcq	2/14/13
Consumer, Business	Subscribers	Operating trends moving in the right direction, but not improving as quickly as hoped	JPM	2/14/13
Consumer, Business	Subscribers	We expect operating trends to continue to improve through 2013 and look for -5.3% line losses, and 173k broadband adds for 2013. For 1Q13 we model -5.7% line losses and 85k broadband adds.	JPM	2/14/13

Notes:

[1] Analyst reports were selected from the top four or five brokers and investment banks who most consistently issued reports on CenturyLink. The reports immediately following each earnings release were selected

[2] Bolded Text indicates that the entry was the heading of a section within the analyst report.

EXHIBIT 8A
EARNINGS RELEASE DATA - 2013, Q2

PR Section	Segment	Metric	Period	Value	Units	Trend	Quote
H/B	All	Op. Rev.	Q	4.53	\$B	down	Operating revenues for second quarter 2013 were \$4.53 billion compared to \$4.61 billion in second quarter 2012. This decrease was driven by lower legacy services revenues primarily due to the impact of access line losses and lower access revenues, partially offset by increases in strategic revenues resulting primarily from increased business customer demand for high-bandwidth data services, colocation and managed hosting services and year-over-year growth in high-speed Internet and CenturyLink Prism TV subscribers.
H	All	Core Rev.	Q	4.11	\$B		Achieved second quarter operating revenues of \$4.53 billion including core revenues(1) of \$4.11 billion
H/B	All	Op. Cash Flow	Q	1.86	\$B	down	Operating cash flow (as defined in our attached supplemental schedules), excluding special items, decreased to \$1.86 billion from \$1.90 billion in second quarter 2012. This decrease was primarily the result of lower legacy revenues being partially offset by higher strategic revenues, higher data integration margins and lower personnel-related costs.
H/B	All	Adj. Diluted EPS	Q	0.69	\$	up	Achieved Adjusted Diluted EPS(2) of \$0.69, excluding special items, compared to \$0.65 in second quarter 2012
H	All	Free Cash Flow	Q	703	\$M		Generated Free Cash Flow(2) of \$703 million, excluding special items and integration-related capital expenditures
H/B	All	Prism TV Customers	Q	132,000	subscribers	up	Added 12,200 CenturyLink Prism TV subscribers during second quarter, ending the quarter with more than 132,000 customers.
H	All	Shares Repurchased	Q	29	million shares		Repurchased nearly 29 million shares, or 4.6% of December 31, 2012 outstanding shares, for approximately \$1 billion from program inception through August 6, 2013
B	All	High-speed Internet Subscribers	Q	5.91	million subscribers	down (q/q)	Ended the quarter with 5.91(3) million high-speed Internet subscribers in service, a decline of approximately 8,400 subscribers in second quarter 2013 due to typical seasonality and weaker than expected indirect sales.
B	All	Purchased and Retired Shares	Q	465	\$M		Purchased and retired 12.8 million shares for \$465 million during second quarter 2013.

EXHIBIT 8A
EARNINGS RELEASE DATA - 2013, Q2

PR Section	Segment	Metric	Period	Value	Units	Trend	Quote
B	All	Op. Expenses	Q	3.79	\$B	down	Operating expenses, excluding special items, decreased to \$3.79 billion from \$3.92 billion in second quarter 2012. The year-over-year decrease was primarily due to lower personnel-related costs, data integration and depreciation and amortization expenses, which were partially offset by higher colocation and managed hosting costs.
B	All	Op. Cash Flow Margin	Q	41.1	percent	down	For second quarter 2013, CenturyLink achieved an operating cash flow margin, excluding special items, of 41.1% versus 41.2% in second quarter 2012.
B	All	Adj. Net Income	Q	417	\$M	up	Excluding the items outlined above, CenturyLink's Adjusted Net Income for second quarter 2013 was \$417 million compared to Adjusted Net Income of \$403 million in second quarter 2012.
B	All	Net Income (GAAP)	Q	269	\$M	up	Under generally accepted accounting principles (GAAP), net income for second quarter 2013 was \$269 million compared to \$74 million for second quarter 2012, and diluted earnings per share for second quarter 2013 was \$0.44 compared to \$0.12 for second quarter 2012.
		Diluted EPS (GAAP)		0.44	\$	up	
B	Consumer	Strategic Rev.	Q	628	\$M	up	Strategic revenues were \$628 million in the quarter, a 6.4% increase over second quarter 2012.
B	Consumer	Total Rev.	Q	1.49	\$B	down	Generated \$1.49 billion in total revenues, a decrease of 3.0% from second quarter 2012, reflecting the continued decline in legacy services tempered by the impact of Access Recovery Charges implemented effective July 1, 2012, in accordance with the CAF Order(4).
B	Business	Strategic Rev.	Q	617	\$M	up	Strategic revenues were \$617 million in the quarter, a 4.6% increase over second quarter 2012, driven by strength in high-bandwidth offerings such as MPLS(5) and Ethernet services.
B	Business	Total Rev.	Q	1.53	\$B	down	Generated \$1.53 billion in total revenues, a 0.8% decline from second quarter 2012, as lower legacy services offset growth in high-bandwidth offerings.

EXHIBIT 8A
EARNINGS RELEASE DATA - 2013, Q2

PR							
Section	Segment	Metric	Period	Value	Units	Trend	Quote
B	Wholesale	Strategic Rev.	Q	572	\$M	down	Strategic revenues of \$572 million in the quarter decreased \$3 million compared to second quarter 2012, as declines in copper-based revenue were partially offset by increases in wireless carrier bandwidth demand and Ethernet sales.
B	Wholesale	Total Rev.	Q	910	\$M	down	Generated \$910 million in total revenues, a decrease of 3.8% from second quarter 2012, reflecting the continued decline in legacy revenues, primarily driven by the implementation of access rate reductions effective July 1, 2012, in accordance with the CAF Order(4) and lower long distance and switched access minutes of use.
B	Wholesale	Fiber Builds Completed	Q	1,150	units		Completed more than 1,150 fiber builds in second quarter 2013 and expect to complete a total of 4,000 to 5,000 fiber builds in full-year 2013.
B	Data Hosting	Op. Rev.	Q	347	\$M	up	Operating revenues were \$347 million in the quarter, a 7.4% increase from second quarter 2012.
B	Data Hosting	Colocation Rev.	Q	145	\$M	up	Colocation revenues were \$145 million, a 2.1% increase from second quarter 2012, and managed hosting revenues were \$134 million, representing a 21% increase over the same period a year ago.
		Managed Hosting Rev.		134	\$M	up	
G	Wholesale	Fiber builds	A	4,000 - 5,000			Completed more than 1,150 fiber builds in second quarter 2013 and expect to complete a total of 4,000 to 5,000 fiber builds in full-year 2013.
G	All	Op. Rev.	Q	4.5 - 4.55	\$B		
G	All	Core Rev.	Q	4.09 - 4.14	\$B		
G	All	Op. Cash Flow	Q	1.79 - 1.83	\$B		
G	All	Adj. Diluted EPS	Q	0.59 - 0.64	\$		
G	All	Op. Rev.	A	18.05 - 18.2	\$B		8/7/13 Guidance
G	All	Core Rev.	A	16.4 - 16.5	\$B		8/7/13 Guidance

EXHIBIT 8A
EARNINGS RELEASE DATA - 2013, Q2

PR							
Section	Segment	Metric	Period	Value	Units	Trend	Quote
G	All	Op. Cash Flow	A	7.35 - 7.5	\$B	8/7/13	Guidance
G	All	Adj. Diluted EPS	A	2.63 - 2.73	\$	8/7/13	Guidance
G	All	Capital Expend.	A	2.9 - 3	\$B	8/7/13	Guidance
G	All	Free Cash Flow	A	3 - 3.15	\$B	8/7/13	Guidance
Number of Reported Values:				35	Trend:	10 9	Up Down

EXHIBIT 8B**2013 Q2 Earnings Release Analyst Reports Major Themes****Major Themes**

- CTL's aggressive stock buybacks in Q1 and Q2 tended to be viewed favorably by analysts, although disagreement existed. (4/4)
- Access line losses were greater than expected, and broadband subscribers declined even though many had predicted an increase. (4/4)
- Most analysts identified the potential for increased competition from cable and wireless internet services as a risk. (3/4)

Category 1	Category2	Quotations	Report	Date
All	Buyback	Buybacks to date have been aggressive – \$465 million in 2Q and another ~\$150 million so far in 3Q after \$386m in 1Q – roughly 5% of daily volume since the 4Q print and sell-off, and if shares remain in the mid-\$30s, we would expect the fast pace to continue.	JPM	8/8/13
All	Buyback	CenturyLink has used all excess cash on the buyback in Q1 and Q2	Mcq	8/8/13
All	Buyback	We estimate that CTL will exhaust its current \$2bn repurchase authorization by year end and as such the pace will likely slow or be eliminated sometime in 2014.	Mcq	8/8/13
All	Guidance and Forecasts	2013 outlook:	Jffrs	8/12/13
All	Guidance and Forecasts	The company modestly reduced its 2013 guidance for operating revenues to \$18.05-\$18.20B (\$25M lower at the midpoint), operating cash flow to \$7.35-\$7.50B (\$50M lower at the high end), and FCF to \$3.0-\$3.15B (\$75M lower at the mid point). We are projecting revenues of \$18.2B and operating cash flow of \$7.5B.	Jffrs	8/12/13
All	Guidance and Forecasts	Valuation/Risks	Jffrs	8/12/13
All	Guidance and Forecasts	Key risks include: (i) wireless substitution, (ii) cable competition, (iii) higher capex if CTL decides to invest in growth opportunities.	Jffrs	8/12/13
All	Guidance and Forecasts	2013 cash flow, EBITDA and EPS guidance lowered to February level.	JPM	8/8/13

EXHIBIT 8B**2013 Q2 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
All	Guidance and Forecasts	Management lowered revenue guidance to \$18.05-18.2b from \$18.1-18.3b due to slower data hosting growth, faster decline of low bandwidth services, and lower USF rates.	JPM	8/8/13
All	Guidance and Forecasts	Investment Thesis	JPM	8/8/13
All	Guidance and Forecasts	CenturyLink has had a successful track record of growth through acquisitions, successful integrations, as well as taking on initiatives to improve revenue trends. Given the secular decline in voice access lines, the company's revenue stream continues to move from high-margin legacy voice products to lower-margin strategic products, and we expect margin to be under meaningful pressure. However, as strategic revenue growth accelerates enough to offset the decline in legacy access revenue, leading to the corresponding revenue stabilization forecast by 2014 and EBITDA stabilization not long after, we are upbeat on the long-term prospects of the company.	JPM	8/8/13
All	Guidance and Forecasts	Risks to Rating and Price Target	JPM	8/8/13
All	Guidance and Forecasts	Further deterioration in economic fundamentals at the consumer or enterprise levels pose risk to access line and revenue trends as consumer markets could deteriorate from already high levels and the expected recovery in business markets could be pushed further out. This would also make it harder to gain traction with CenturyLink's video and broadband revenue growth initiatives.	JPM	8/8/13
All	Guidance and Forecasts	Competitive pressures in the urban Qwest territories could pose challenges	JPM	8/8/13
All	Guidance and Forecasts	While CenturyLink has done a good job with those assets thus far, the company may face challenges in improving operating metrics in these acquired properties given the high level of competition from cable and CLEC operators.	JPM	8/8/13
All	Guidance and Forecasts	Estimate Changes	MS	8/8/13
All	Guidance and Forecasts	We reduce our 2013 EPS estimate to \$2.73 from \$2.79, in-line with the top end of guidance. We reduce 2013 revenue growth to -1.3% from -0.8%.	MS	8/8/13

EXHIBIT 8B**2013 Q2 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
All	Guidance and Forecasts	Upcoming Catalysts	MS	8/8/13
All	Guidance and Forecasts	<ul style="list-style-type: none"> • Earnings, deal execution, buybacks • Raising guidance • Continued improvement in revenue trajectory, line loss trends, and broadband adds • Integration of Qwest and SAVVIS • SAVVIS cross-selling opportunities • Aggressive share buybacks (\$2B authorization) 	MS	8/8/13
All	Guidance and Forecasts	Risks	MS	8/8/13
All	Guidance and Forecasts	<ul style="list-style-type: none"> • Cable competition with 90%+ overlap • Macro pressure on enterprise revenue • Margin pressure from revenue mix shift • Increased regulatory pressure • Pension / OPEB obligations • Capex Pressure 	MS	8/8/13
All	Guidance and Forecasts	Key Investment Debates	MS	8/8/13
All	Guidance and Forecasts	While CenturyLink raised guidance in 1Q on the back of strong results, this quarter they dialed back guidance on softer results, putting us nearly back where we started at the beginning of the year.	MS	8/8/13
All	Revenue, Margins, and Profits	CTL reported mixed 2Q13 results.	Jffrs	8/12/13
All	Revenue, Margins, and Profits	Revs were in-line, while operating CF was above estimates, however broadband net adds, access line losses, and capex were worse than forecast.	Jffrs	8/12/13
All	Revenue, Margins, and Profits	CTL reduced FY guidance modestly. However, we believe CTL continues to inch closer to revenue stabilization as it invests in data centers, Prism TV, and FTTT. Meanwhile, CTL continues to buy back shares at a faster than expected rate.	Jffrs	8/12/13

EXHIBIT 8B

2013 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Revenue, Margins, and Profits	Solid cost control.	Jffrs	8/12/13
All	Revenue, Margins, and Profits	Operating CF of \$1.86B was slightly better than our/consensus estimate of \$1.84/\$1.85B. Adjusted diluted EPS of \$0.69 was higher than our/Street estimate of \$0.66/\$0.67. Cash costs declined slightly QoQ despite continued investments in the network.	Jffrs	8/12/13
All	Revenue, Margins, and Profits	CenturyLink delivered a mixed 2Q13, with weaker revenue and broadband sub losses but better EBITDA and EPS due to lower operating expenses. In addition, the company took down guidance essentially back to its level in February, wiping out the May increase.	JPM	8/8/13
All	Revenue, Margins, and Profits	2Q revenues weaker while EBITDA better.	JPM	8/8/13
All	Revenue, Margins, and Profits	2Q13 revenue of \$4.525b was weaker than our \$4.536b but EBITDA came in at \$1.858b, 1.2% above our expectation on 41.1% margin vs. our \$1.837b and 40.5% estimate due to lower personnel and data integration costs.	JPM	8/8/13
All	Revenue, Margins, and Profits	Event	Mcq	8/8/13
All	Revenue, Margins, and Profits	CenturyLink (CTL) reported rather uninspiring Q2 results that were essentially in line with Macquarie and consensus on a revenue, EBITDA and FCF basis. However, higher-than expected access line erosion and negative broadband net adds are likely to pressure revenue and EBITDA in future quarters, making 2013 targets more challenging.	Mcq	8/8/13
All	Revenue, Margins, and Profits	Action and recommendation	Mcq	8/8/13
All	Revenue, Margins, and Profits	Despite stronger US job growth in 2013, which is normally a driver of Qwest revenue, we have yet to see strong evidence of an 'Enterprise recovery' in CTL's cyclical businesses.	Mcq	8/8/13
All	Revenue, Margins, and Profits	Though \$0.69 EPS beat MSe by 1c, and margins were strong, FY13 guidance revisions disappointed. However, aggressive buybacks, a strong balance sheet and FCF and solid revenue improvement continue to support our view that the dividend is sustainable.	MS	8/8/13

EXHIBIT 8B

2013 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Revenue, Margins, and Profits	Mixed Results, Disappointing Guidance:	MS	8/8/13
All	Revenue, Margins, and Profits	We were disappointed by the downward revision to revenue guidance and the expectation of a slight decline in 2014 instead of revenue stability.	MS	8/8/13
All	Revenue, Margins, and Profits	Impact on our Views	MS	8/8/13
All	Revenue, Margins, and Profits	Aggressive buybacks are creating more headroom than expected and the balance sheet and FCF remain solid while management continues to make progress toward stable revenue and EBITDA	MS	8/8/13
All	Revenue, Margins, and Profits	Savvisdirect uptake has been weaker than expected, contributing about \$20M in lowered revenue expectations in 2H13. Higher than expected revenue compression contributed about \$30M in lowered expectations, while another \$25-\$30M came from other sources.	MS	8/8/13
All	Revenue, Margins, and Profits	2Q13 Highlights: Charts	MS	8/8/13
All	Revenue, Margins, and Profits	Strategic Revenue (48% of Total) Growth Was Flat; Legacy Revenue Trajectory (43% of Total) Improved	MS	8/8/13
All	Revenue, Margins, and Profits	2Q13 Highlights: What We Liked / Did Not Like	MS	8/8/13
All	Revenue, Margins, and Profits	Revenues missed estimates on weaker than expected consumer revenue, despite strong wholesale revenues. Revenues from savvisdirect have not ramped as expected, while USF and higher than expected low-speed broadband losses contributed to revenue weakness.	MS	8/8/13
All	Revenue, Margins, and Profits	Weaker than expected revenues due to slow uptake of savvisdirect and slower than expected colocation revenues due to pressure from large customer transitions [Related to Data Hosting]	MS	8/8/13
All	Subscriber	Mixed 2Q13 Results.	Jffrs	8/12/13
All	Subscriber	CTL reported access line loss of 227k, worse than our/Street forecast of 187k/208k but an improvement over 2Q12 loss of 234k. High speed net adds of (6)k were also below our/Street	Jffrs	8/12/13

EXHIBIT 8B

2013 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Subscriber	Q2 access line erosion ticked up slightly at -5.8% vs. -5.7% in Q1. This does not bode well for the company's revenue growth targets, in our opinion.	Mcq	8/8/13
All	Subscriber	Access line erosion began to accelerate again in Q2	Mcq	8/8/13
All	Subscriber	CTL updated full-year 2013 guidance in the Q2 release. Revised 2014 revenue guidance for 'slightly down' implies a delay in the revenue inflection point. We had been skeptical all along that the company would reach the inflection point as soon as 2014. Now, approximately 18 months ahead of CTL, management is lowering the bar.	Mcq	8/8/13
All	Subscriber	Operating metrics were soft, with higher than expected line losses of 5.8% Y/Y (MSe: 5.6%) and broadband losses in a seasonally weak quarter, down 8k subs (MSe: +15k). CenturyLink believes subs will return to growth for the balance of 2013.	MS	8/8/13
All	Subscriber	Consumer and Wholesale Revenue Trajectory Improved; Data Hosting and Business Slowed	MS	8/8/13
Business	Revenue, Margins, and Profits	Business revenue slightly below estimates because of lower access lines and despite strong high-bandwidth product revenues. [Related to Business]	MS	8/8/13
Consumer	Revenue, Margins, and Profits	Weaker revenue due to access line losses and reduced MOUs and lower local long-distance. [Related to Consumer]	MS	8/8/13
Consumer, Business	Guidance and Forecasts	Topline stabilization remains on hand.	Jffrs	8/12/13
Consumer, Business	Guidance and Forecasts	In our view, CTL has positioned the business to show continued improvement in topline trends as data centers, FTTT, Prism TV, and higher broadband penetration continue to grow.	Jffrs	8/12/13
Consumer, Business	Subscriber	Operating trends of both voice and broadband weaker than expected.	JPM	8/8/13
Consumer, Business	Subscriber	HSI losses came in at -8k vs. our add of 15k and consensus of 31k as the company experienced its first ever decline due to seasonal weakness, lower than a normal level of indirect sales, and high penetration headwind. Management expects broadband net adds to be positive for the remainder of the year, but it cannot be ignored that what was once a secular tailwind is starting to run out.	JPM	8/8/13

EXHIBIT 8B**2013 Q2 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
Consumer, Business	Subscriber	Strong PrismTV momentum in Phoenix has led to an additional launch in Colorado Springs.	JPM	8/8/13
Consumer, Business	Subscriber	Even with that success, management continues to proceed cautiously in expanding PrismTV to additional markets and has not indicated any additional market launches at this time. As such, while the low end of the capex guidance was raised, now at \$2.9-3.0b from \$2.8-3.0b previously, the increase is not coming from PrismTV expansion but from success in the business segment as well as normal network capacity growth needs.	JPM	8/8/13
Wholesale	Revenue, Margins, and Profits	Better than expected revenues driven by growth in ethernet services and bandwidth expansion by wireless customers. [Related to Wholesale]	MS	8/8/13

Notes:

[1] Analyst reports were selected from the top four or five brokers and investment banks who most consistently issued reports on CenturyLink. The reports immediately following each earnings release were selected

[2] Bolded Text indicates that the entry was the heading of a section within the analyst report.

EXHIBIT 9A
EARNINGS RELEASE DATA - 2013, Q4

PR Section	Segment	Metric	Period	Value	Units	Trend	Quote
H/B	All	Op. Rev.	Q	4.54	\$B	down	Achieved operating revenues of \$4.54 billion, including core revenues of
		Core Rev.	Q	4.11		down	\$4.11 billion
H/B	All	Op. Cash Flow	Q	1.84	\$B	down	Generated operating cash flow of \$1.84 billion, excluding special items
H/B	All	Free Cash Flow	Q	601	\$M		Generated free cash flow of \$601 million, excluding special items and integration-related capital expenditures
H/B	All	Adj. Net Income	Q	396	\$M	down	Achieved Adjusted Net Income of \$396 million and Adjusted Diluted EPS of \$0.68, excluding special items
		Adj. Diluted EPS		0.68	\$	up	
H	All	Shares Repurchased		50.8	million shares		Repurchased 50.8 million shares through February 11, 2014 for approximately \$1.72 billion since inception of \$2 billion program in February 2013; representing 8.2% of outstanding shares as of December 31, 2012.
		Value of Shares Repurchased		1.72	\$B		
B	All	High-Speed Internet Subscribers	Q	~6	million subscribers	up (q/q)	Added approximately 49,000 high-speed Internet subscribers during fourth quarter, ending the period with nearly six million subscribers in service.
B	All	Prism TV Subscribers	Q	175,000	subscribers	up (q/q)	Ended the quarter with 175,000 CenturyLink® Prism™ TV subscribers, a record increase of approximately 26,000 subscribers in fourth quarter 2013.
B	All	Shares Purchased and Retired		10.5	million shares		Purchased and retired 10.5 million shares for \$331 million during fourth quarter 2013.
B	All	Op. Expenses	Q	3.87	\$B	down	Operating expenses, excluding special items, decreased to \$3.87 billion from \$3.89 billion in fourth quarter 2012. The year-over-year decrease in depreciation and amortization expenses along with favorable year-end employee benefit and operating tax expense adjustments were partially offset by higher facility costs, increased costs related to the growth of Prism™ TV and higher selling costs.

EXHIBIT 9A
EARNINGS RELEASE DATA - 2013, Q4

PR Section	Segment	Metric	Period	Value	Units	Trend	Quote
B	All	Op. Rev.	A	18.1	\$B	down	For the full-year 2013, operating revenues decreased to \$18.1 billion from \$18.4 billion for the same period in 2012. [...] The decline in operating revenues was driven by lower legacy services revenues primarily due to the impact of access line losses and lower access revenues, partially offset by increases in strategic revenues resulting primarily from increased business customer demand for high-bandwidth data services and hosting solutions, along with growth in high-speed Internet and CenturyLink® Prism™ TV subscribers.
B	All	Op. Cash Flow	A	7.4	\$B	down	Operating cash flow, excluding special items, was \$7.4 billion for 2013 compared to \$7.7 billion in 2012. [...] The operating cash flow decline was driven by the reduction in higher-margin legacy voice and access revenues, which was partially offset by growth in lower-margin strategic revenues.
B	All	Adj. Net Income	A	1.66	\$B	flat	Adjusted Net Income, excluding special items, was \$1.66 billion in both 2013 and 2012.
B	All	Adj. Diluted EPS	A	2.76	\$	up	Adjusted Diluted EPS, excluding special items, was \$2.76 in 2013 compared to \$2.67 for 2012.
B	All	Net Income (GAAP)	Q	239	\$M	up	Under generally accepted accounting principles (GAAP), net income for fourth quarter 2013 was \$239 million compared to \$233 million net income for fourth quarter 2012, and diluted earnings per share for fourth quarter 2013 was \$0.41 compared to \$0.37 diluted earnings per share for fourth quarter 2012.
		Diluted EPS (GAAP)		0.41	\$	up	
B	All	Net Income (GAAP)	A	-239	\$M	down	Net loss under GAAP for full-year 2013 was \$239 million compared to net income of \$777 million for full-year 2012, and loss per share for full-year
		EPS (GAAP)		-0.4	\$	down	2013 was \$0.40 compared to earnings per share of \$1.25 for full-year 2012.
B	Consumer	Strategic Rev.	Q	683	\$M	up	Strategic revenues were \$683 million in the quarter, a 7.7% increase over fourth quarter 2012.

EXHIBIT 9A
EARNINGS RELEASE DATA - 2013, Q4

PR Section	Segment	Metric	Period	Value	Units	Trend	Quote
B	Consumer	Total Rev.	Q	1.50	\$B	down	Generated nearly \$1.50 billion in total revenues, a decrease of 1.7% from fourth quarter 2012, reflecting the continued decline in legacy services tempered by growth in strategic services.
B	Business	Strategic Rev.	Q	643	\$M	up	Strategic revenues were \$643 million in the quarter, a 7.5% increase over fourth quarter 2012, driven by strength in high-bandwidth offerings such as MPLS4 and Ethernet services.
B	Business	Total Rev.	Q	1.56	\$B	up	Generated \$1.56 billion in total revenues, an increase of 1.0% from fourth quarter 2012, as growth in high-bandwidth offerings offset lower legacy services revenues.
B	Wholesale	Fiber- Connected Towers		18,800	units	up	The Wholesale segment ended the year with more than 18,800 fiber-connected towers, an increase of nearly 30% from year-end 2012.
B	Wholesale	Strategic Rev.	Q	581	\$M	up	Strategic revenues were \$581 million in the quarter, a 1.6% increase over fourth quarter 2012, as increases in wireless carrier bandwidth demand and Ethernet sales, along with delays in copper-based wireless disconnects, offset declines in copper-based revenue.
B	Wholesale	Total Rev.	Q	884	\$M	down	Generated \$884 million in total revenues, a decrease of 2.5% from fourth quarter 2012, reflecting the continued decline in legacy revenues, primarily driven by lower long distance and switched access minutes of use, along with access rate reductions.
B	Wholesale	Fiber Builds Completed	Q A	930 4,100	units		Completed 930 fiber builds in fourth quarter 2013 and more than 4,100 fiber builds in full-year 2013.
B	Data Hosting	Op. Rev.	Q	353	\$M	up	Operating revenues were \$353 million in the quarter, a 3.8% increase from fourth quarter 2012.
B	Data Hosting	Colocation Rev. Managed Hosting Rev.	Q	147 142	\$M	up up	Colocation revenues were \$147 million, a 1.4% increase from fourth quarter 2012, and managed hosting revenues were \$142 million, representing a 14% increase over the same period a year ago.
G	All	Op. Rev.	Q	4.46 - 4.51	\$B		
G	All	Core Rev.	Q	4.07 - 4.12	\$B		

EXHIBIT 9A
EARNINGS RELEASE DATA - 2013, Q4

PR						
Section	Segment	Metric	Period	Value	Units	Trend
G	All	Op. Cash Flow	Q	1.73 - 1.78	\$B	
G	All	Adj. Diluted EPS	Q	0.58 - 0.63	\$	
G	All	Op. Rev.	A	17.90 - 18.10	\$B	
G	All	Core Rev.	A	16.25 - 16.45	\$B	
G	All	Op. Cash Flow	A	7.05 - 7.25	\$B	
G	All	Adj. Diluted EPS	A	2.40 - 2.60	\$	
G	All	Free Cash Flow	A	2.6 - 2.8	\$B	
Number of Reported Values:				41	Trend:	14 Up 11 Down

EXHIBIT 9B**2013 Q4 Earnings Release Analyst Reports Major Themes*****Major Themes***

- CTL had a strong 4th quarter as many metrics, including EBITDA, EPS, and others, beat individual and consensus estimates. (5/5)
- Both Prism TV and High-Speed Internet subscribers increased by more than expected, by 14K and 40K respectively. (4/5)
- More than half of the reports made space for management's prediction of revenue and EBITDA stability in the next few years. (3/5)

Category 1	Category2	Quotations	Report	Date
All	Guidance and Forecasts	In addition, management disclosed that it will recommend the Board upsize the current \$2bn buyback program when it meets later this month.	BoA	2/13/14
All	Guidance and Forecasts	Although we believe it will likely take at least two to three consecutive quarters of solid execution for CTL to convince a skeptical market that the business has a credible path to top line growth and EBITDA stability, we believe the company did its part to reset the conversation with its 4Q result and guidance. Our PO of \$41 is based on a 5.6x 2014E EV/EBITDA multiple, which compares to the RLEC average 5.3x, warranted, in our view, by the proximity of positive revenue inflection and a superior collection of RLEC assets.	BoA	2/13/14
All	Guidance and Forecasts	Improving revenue trends & active cost management	BoA	2/13/14
All	Guidance and Forecasts	Our 2014 revenue estimate is unchanged at \$18.0b (-0.6% Y/Y), at the mid-point of the company's guidance of 0.0% to -1.2% Y/Y declines. Our '14 Adj. EBITDA / margin estimate is also unchanged at \$7.18bn / 39.9%. We are just above the midpoint of the guidance range of \$7.05-7.25b / 39.7%. The company expects to proactively manage its cost structure with initiatives that will likely culminate in 2H. We estimate a 39.5% margin in 1H14 and 40.2% in 2H14	BoA	2/13/14
All	Guidance and Forecasts	Model updates - revenue	BoA	2/13/14

EXHIBIT 9B**2013 Q4 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
All	Guidance and Forecasts	We expect Y/Y improvements will come primarily in the second half of the year as 1x customer losses in the data hosting segment roll-off. We estimate Core Revenue, which is comprised of the company's strategic and legacy businesses and excludes 'data integration' and 'other' of \$16.4b, within the guidance range of \$16.25-16.45b. In 1Q14 we estimate total revenue of \$4.47b, towards the low-end of the guidance range of \$4.46-4.51b.	BoA	2/13/14
All	Guidance and Forecasts	Slowing expansion in key strategic initiatives provides no capex relief	Jffrs	2/13/14
All	Guidance and Forecasts	Capex is expected to remain elevated in 2014, at ~\$3bn (flat vs. 2013). However, spending in two of the company's strategic initiatives (Prism and FTTT) is likely to slow. Management does not anticipate opening any new Prism markets in 2014. Rather, expansion in existing markets could yield 300k-400k addressable homes, down from 800k in 2013. To be fair, CTL's 2013 expansion exceeded initial projections, though we think the company would benefit from continued momentum into 2014. FTTT builds are expected to slow from 4.1k in 2013, to 3.0-3.5k.	Jffrs	2/13/14
All	Guidance and Forecasts	Strong results across the board, with top-line beat driven by business and wholesale. FY14 guidance suggests moderating revenue decline. The company is aggressively buying back stock, supporting the payout ratio. With improving fundamentals, strong FCF and a 7.2% div. yield, we reiterate OW	MS	2/13/14
All	Guidance and Forecasts	Management provides guidance for the full year 2014.	MS	2/13/14
All	Guidance and Forecasts	CenturyLink expects FY14 revenues to improve from -1.5% in FY13 to - 1.2% to 0.0%, with the midpoint of guidance a \$7.15B for EBITDA and \$2.7B for FCF. Guidance suggests some margin pressure in the first quarter (39.1% v. 39.7% for the year), although management has expense reduction programs in place.	MS	2/13/14
All	Guidance and Forecasts	Upcoming catalysts	MS	2/13/14
All	Guidance and Forecasts	Continued improvement in revenue trajectory, line loss trends, and broadband adds	MS	2/13/14
All	Guidance and Forecasts	CenturyLink will stabilize revenues in 2015	MS	2/13/14

EXHIBIT 9B**2013 Q4 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
All	Guidance and Forecasts	Management feels comfortable guiding towards -1.2% to 0.0% revenue growth in 2014, reiterated plans for revenue stability in 2015, and expects EBITDA stability approximately a year after they get to revenue stability. While guidance has been conservative in the past (EPS +33c v. the midpoint of initial guidance, +24c v. the high end of initial guidance), the company faced some challenges with the integration of Savvis in 2013, and lowered guidance during the second quarter. We estimate that the growth of strategic services will offset the secular decline of legacy services, with growth coming from data hosting services and investments in fiber to the tower, once revenue compression mitigates.	MS	2/13/14
All	Guidance and Forecasts	CTL's results were better than expected in each metric. This was a happy surprise given weaker performance in past quarters. While the company continues to be at least a year away from revenue stability, we continue to believe in the FCF generation of this company. With a dividend yield of over 7%, (and commentary on the call very much supporting this dividend), we believe the risk/reward ratio to be an attractive one. Our new FY2014 revenue and EPS estimates are \$18.01B and \$2.59 vs. \$17.98B and \$2.81 prior. We are also introducing FY2015E revenue and EPS of \$18.04B and \$2.62, respectively.	WF	2/13/14
All	Revenue, Margins, and Profits	CTL reported a strong 4Q result that beat cleanly on revenue and was in line with the Street on EBITDA after stripping out \$60m of 1x cost benefits. Importantly, the company is guiding to an improving rate of revenue decline in '14 (-0.6% Y/Y vs. -1.5% Y/Y in '13) with healthy margins of 39.7% at the mid-point vs. 41.1% in 2013, and revenue stability at a minimum in 2015.	BoA	2/13/14
All	Revenue, Margins, and Profits	Revenue modestly outperformed, though adj. EBITDA, excluding a one-time \$60mn cost benefit, was slightly weaker. Broadband and Prism TV continue to perform well, though less aggressive Prism expansion in 2014 could slow subscriber growth. Overall, results and guidance provide little relief to our concerns of the secular challenges of the business as evidenced by the outlook for a 12% EBITDA-driven drop in FCF. We maintain our Underperform rating.	Jffrs	2/13/14
All	Revenue, Margins, and Profits	CenturyLink delivered a solid 4Q13, with strong broadband sub additions and better revenue and EBITDA from strong growth in strategic services. 1Q14 guidance implies lower margins q/q due to one-time benefits in 4Q13 from employee benefit adjustments and a tax reserve elimination. 1Q14 and 2014 full-year guidance was in-line with our previous estimates.	JPM	2/13/14

EXHIBIT 9B

2013 Q4 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Revenue, Margins, and Profits	Buybacks to date have been aggressive – \$331m in 4Q for a total of \$1.57b in 2013 and \$1.72b or 50.8m shares through Feb 1 of this year. Management hinted at another repurchase authorization when the board meets later this month and if shares remain in the low-\$30s, we would expect the fast pace to continue. We reiterate our Overweight rating and maintain our YE2014 PT of \$38	JPM	2/13/14
All	Revenue, Margins, and Profits	4Q revenues and EBITDA both slightly better.	JPM	2/13/14
All	Revenue, Margins, and Profits	4Q13 revenue of \$4.54b was better than our \$4.51b and EBITDA came in a hair higher at \$1.799b on 39.6% margin vs. our \$1.782b and 39.5% estimate due to positive employee benefit adjustments, a tax reserve elimination, and year-end tax true up. Adjusted EPS came in at \$0.68 vs. our and the Street's \$0.59, though adjusted for one-time items would have been in-line.	JPM	2/13/14
All	Revenue, Margins, and Profits	CenturyLink ended a difficult year with a strong fourth quarter.	MS	2/13/14
All	Revenue, Margins, and Profits	Most encouraging was a top-line decline of 0.9% (MSe: -1.5%, consensus: -1.4%), with the beat driven by business revenues (+1.0% Y/Y) and wholesale (-2.5% Y/Y, from -5.9% Y/Y in 4Q12). EBITDA of \$1.84B (40.4% margins) beat our estimate by \$66M, although \$60M came from one-time expense reductions in the quarter, and helped drive an EPS beat (MSe: \$0.68, Consensus: \$0.59). Broadband adds of 49k were a positive surprise (MSe 30k), driven by continued investment in higher speeds and record PrismTV adds, and line loss moderated to 5.4% Y/Y.	MS	2/13/14
All	Revenue, Margins, and Profits	Impact of 4Q results	MS	2/13/14
All	Revenue, Margins, and Profits	Management said, "Our guidance last year, in 2013, if you recall, we had a hockey stick, basically in revenues. We feel much more comfortable with the revenue guidance in 2014, I think, looking back on the experience we had last year." In the fourth quarter, data hosting revenues grew +3.2% Q/Q (v. +2.5% to +3.0% that management guided to during third quarter earnings).	MS	2/13/14

EXHIBIT 9B

2013 Q4 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Revenue, Margins, and Profits	Q4 Results	WF	2/13/14
All	Revenue, Margins, and Profits	CTL reported Q4 total revenue, Adjusted EBITDA, and Adjusted Diluted EPS of \$4.54B, \$1.84B and \$0.68 vs. our estimates of \$4.50B, \$1.76B and \$0.60, respectively. Strategic Services revenue of \$2.26B beat our \$2.21B estimate and was up 6.4% y/y from \$2.12B in Q4'12. Growth in Strategic Services was offset by a decline in Legacy Services, which were down -7.6% y/y to \$1.85B from \$2.0B in Q4'12.	WF	2/13/14
All	Subscribers	Furthermore, we were pleased to see CenturyLink add 49k broadband subscribers and 26k PrismTV subscribers, as well as the modest improvement in line loss to -5.4% Y/Y.	MS	2/13/14
Consumer, Business	Guidance and Forecasts	As we look into 2014 we expect operating trends to continue to move in the right direction and look to exit 2014 at a -5.5% run-rate on access lines and +1.7% annual broadband sub growth for all of 2014 vs. our previous -4.5% and +1.2%.	JPM	2/13/14
Consumer, Business	Revenue, Margins, and Profits	CTL reported top line results that were better than feared, specifically Consumer revenue of \$1.50B was slightly higher than our \$1.49B estimate, Business revenue of \$1.56B beat our \$1.54B estimate, and Data Hosting revenue of \$353MM beat our \$350MM est. Q4 capex was \$837MM, finishing FY2013 with \$3.0B, within company expectations.	WF	2/13/14
Consumer, Business	Subscribers	Metrics better	Jffrs	2/13/14
Consumer, Business	Subscribers	Broadband adds of 49K topped our/Street estimates of 35k/31k, and were likely driven by strong Prism TV adds (+26k, up from 17k in 3Q). Prism continues to experience very high attach rates for broadband (98% of TV adds in 4Q), providing further opportunity to drive broadband subscriber growth in the near-term. Addressable homes expanded by 180k.	Jffrs	2/13/14
Consumer, Business	Subscribers	PrismTV adds accelerated in the quarter and we expect the pace to continue in 2014; early GPON indications bode well for businesses.	JPM	2/13/14
Consumer, Business	Subscribers	CenturyLink added 26k PrismTV in the quarter and now has a total of 175k subs. PrismTV is now available to ~2.0m homes, up from 1.1m at the end of 2012, after the addition of another 180k homes in the quarter. Over 50% of PrismTV subscribers are new to CenturyLink and broadband attachment rates were 98% in 4Q.	JPM	2/13/14
Consumer, Business	Subscribers	Broadband and voice both stronger than expected.	JPM	2/13/14

EXHIBIT 9B**2013 Q4 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
Consumer, Business	Subscribers	Access line losses in 4Q were better than our estimate at a 5.4% decline y/y vs. our 5.7%. Broadband adds were also better at 49k vs. our 20k and consensus of 35k as the company overcame the indirect sales issue it had in 2Q13 and was aided by seasonality. Another strong broadband result reinforces hopes that the secular tailwind can continue.	JPM	2/13/14
Consumer, Business	Subscribers	The company added 29K Prism TV and 49K high-speed Internet customers vs. our estimates of 14K and 40K, respectively.	WF	2/13/14

Notes:

[1] Analyst reports were selected from the top four or five brokers and investment banks who most consistently issued reports on CenturyLink. The reports immediately following each earnings release were selected

[2] Bolded Text indicates that the entry was the heading of a section within the analyst report.

EXHIBIT 10A
EARNINGS RELEASE DATA - 2014, Q2

PR							
Section	Segment	Metric	Period	Value	Units	Trend	Quote
H/B	All	Op. Rev. Core Rev.	Q	4.54 4.1	\$B	up down	Achieved operating revenues of \$4.54 billion, including core revenues of \$4.10 billion
H/B	All	Op. Cash Flow	Q	1.81	\$B	down	Generated operating cash flow of \$1.81 billion, excluding special items
H	All	Free Cash Flow	Q	677	\$M		Generated free cash flow of \$677 million, excluding special items and integration-related capital expenditures
H/B	All	Adj. Net Income	Q	408	\$M	down	Achieved Adjusted Net Income of \$408 million and Adjusted Diluted EPS of \$0.72, excluding special items
		Adj. Diluted EPS		0.72	\$	up	
H	All	Value of Shares Repurchased		2	\$B		Completed \$2 billion 2013 share repurchase program; Repurchased 59.5 million shares since inception of program in February 2013, representing 9.6% of outstanding shares as of December 31, 2012
		Shares Repurchased		59.5	million shares		
H/B	All	Follow-On Share Repurchase Program		1	\$B		Commenced follow-on \$1 billion share repurchase program in second quarter.
B	All	Prism TV Customers	Q	215,000	subscribers	up	Added nearly 16,000 CenturyLink® Prism™ TV customers during second quarter, ending the period with approximately 215,000 customers in service.
B	All	High-Speed Internet Customers	Q	6	million	down (q/q)	Ended the quarter with more than 6 million high-speed Internet customers, a decrease of approximately 2,100 in second quarter 2014 due to typical seasonality.

EXHIBIT 10A
EARNINGS RELEASE DATA - 2014, Q2

PR Section	Segment	Metric	Period	Value	Units	Trend	Quote
B	All	Shares Repurchased	Q	4.5	million shares		Purchased and retired an additional 4.5 million shares of CenturyLink common stock for \$160 million during second quarter 2014, of which 1.2 million shares were under the \$1 billion follow-on program.
		Value of Shares Repurchased		160	\$M		
		Shares Repurchased under Follow-On Program		1.2	million shares		
B	All	Op. Expenses	Q	3.82	\$B	up	Operating expenses, excluding special items, increased to \$3.82 billion from \$3.79 billion in second quarter 2013. The year-over-year increase was primarily driven by higher customer premise equipment (CPE) sales costs, expenses related to the growth of Prism TM TV and a higher Universal Service Fund (USF) contribution factor, which were partially offset by lower depreciation and amortization expenses.
B	All	Op. Cash Flow Margin	Q	39.9	percent	down	For second quarter 2014, CenturyLink achieved an operating cash flow margin, excluding special items, of 39.9% versus 41.1% in second quarter 2013. These decreases were primarily driven by the result of lower legacy revenues and the expense increases described above.
B	All	Net Income (GAAP)	Q	193	\$M	down	Under generally accepted accounting principles (GAAP), net income for second quarter 2014 was \$193 million compared to \$269 million for second quarter 2013, and diluted earnings per share for second quarter 2014 was \$0.34 compared to \$0.44 for second quarter 2013.
		Diluted EPS (GAAP)		0.34	\$	down	
B	Consumer	Strategic Rev.	Q	709	\$B	up	Strategic revenues were \$709 million in the quarter, an 8.6% increase over second quarter 2013.
B	Consumer	Total Rev.	Q	1.5	\$B	up	Generated \$1.50 billion in total revenues, slightly higher than second quarter 2013, reflecting strong growth in strategic services partially offset by the continued decline in legacy services.

EXHIBIT 10A
EARNINGS RELEASE DATA - 2014, Q2

PR							
Section	Segment	Metric	Period	Value	Units	Trend	Quote
B	Consumer	Prism TV Penetration of Addressable Homes	Q	10	percent	up	Added nearly 16,000 CenturyLink® Prism™ TV customers during second quarter 2014, increasing penetration of the more than 2.1 million addressable homes to approximately 10%.
B	Business	Strategic Rev.	Q	663	\$M	up	Strategic revenues were \$663 million in the quarter, a 7.8% increase over second quarter 2013, driven by strength in high-bandwidth offerings such as MPLS and Ethernet services.
B	Business	Total Rev.	Q	1.56	\$B	up	Generated \$1.56 billion in total revenues, an increase of 2.6% from second quarter 2013, as growth in high-bandwidth offerings and data integration revenues offset lower legacy services revenues.
B	Business	Data Integration Rev. Growth	Q	20	\$M		Data integration revenues were \$20 million higher in second quarter 2014 compared to second quarter 2013.
B	Business	Segment Margin	Q	37.9	percent	down	Achieved segment margin of 37.9%, which declined from 40.2% a year-ago.
B	Wholesale	Fiber-Connected Towers		19,700	units	up	The Wholesale segment ended the quarter with more than 19,700 fiber-connected towers, an increase of 18% from second quarter 2013.
B	Wholesale	Strategic Rev.	Q	568	\$M	down	Strategic revenues were \$568 million in the quarter, down slightly from second quarter 2013, as increases in wireless carrier bandwidth demand and Ethernet sales were offset by declines in low-speed data revenue.
B	Wholesale	Total Rev.	Q	866	\$M	down	Generated \$866 million in total revenues, a decrease of 4.8% from second quarter 2013, reflecting the continued decline in low-speed data revenues and in legacy revenues, primarily driven by lower long distance and switched access minutes of use, along with access rate reductions from implementation of the CAF Order.

EXHIBIT 10A
EARNINGS RELEASE DATA - 2014, Q2

PR							
Section	Segment	Metric	Period	Value	Units	Trend	Quote
B	Wholesale	Fiber builds Completed	Q	500	units		Completed approximately 500 fiber builds in second quarter 2014; lowered the annual estimate for fiber builds to between 2,000 to 2,500 for full-year 2014 due to continued customer decisions to defer certain sites into 2015.
B	Hosting	Op. Rev.	Q	358	\$M	up	Operating revenues were \$358 million in the quarter, a 3.2% increase from second quarter 2013
B	Hosting	Managed Hosting Rev.	Q	148	\$M	up	Managed hosting revenues were \$148 million, representing a 9.6% increase from second quarter 2013, and colocation revenues were \$158 million, a 1.9% increase over the same period a year ago.
		Colocation Rev.		158		up	
B	Hosting	Op. Expenses Growth	Q	10	\$M	up	Expenses increased \$10 million from second quarter 2013 primarily due to higher employee costs.
G	All	Op. Rev.	Q	4.47 - 4.52	\$B		
G	All	Core Rev.	Q	4.06 - 4.11	\$B		
G	All	Op. Cash Flow	Q	1.72 - 1.77	\$B		
G	All	Adj. Diluted EPS	Q	0.58 - 0.63	\$		
Number of Reported Values:				37	Trend:	14 Up 10 Down	

EXHIBIT 10B
2014 Q2 Earnings Release Analyst Reports Major Themes

Major Themes

- Reactions to the news of -2k Broadband adds was mixed due to differences in expectations. Some analysts noted a smaller loss than their estimates, but larger loss than the consensus. (3/5)
- Several analysts noted that CTL is monitoring the progress of the REIT that Windstream announced, with an eye towards similar opportunities in the future. (3/5)
- EBITDA and other financial metrics beat their projections, reflecting growth, or reduced declines, in several segments. (3/5)

Category 1	Category 2	Quotations	Report	Date
All	Guidance and Forecasts	Action and Recommendation	Mcq	8/11/14
All	Guidance and Forecasts	Our 2015 FCF forecast of \$1.86bln could be \$600mm too low if bonus depreciation is extended as we expect. With initial 2015 capex guidance set at \$3.0bln, we believe CTL could continue to shrink its share count aggressively next year. We believe the company has begun to look at REIT conversion and we view that as \$1 - \$5 of additional upside on top of our \$43 TP.	Mcq	8/11/14
All	Guidance and Forecasts	We continue to favor the FCF story of CTL. By our estimates the company will generate \$4.42 and \$3.50 in FCF/share in 2014 and 2015, respectively. Our new FY2014E revenue/EPS are \$18.08B/\$2.60 vs. \$18.05B/\$2.59 prior, and FY2015E are \$18.11B/\$2.65 vs. \$18.08B/\$2.65 prior, respectively.	WF	8/6/14
All	Other	Full-year guidance remains unchanged. Buybacks in the quarter totaled \$160m, or 4.5m shares, and another 1.4m shares have been bought since the end of 2Q to date for \$52m. We expect the buyback pace to slow a bit as the shares have almost rebounded back to pre-dividend cut levels. We reiterate our Overweight rating and establish our Dec-2015 price target of \$43.	JPM	8/6/14
All	Other	Buyback expected to continue but at a more moderate pace; we model a 55% payout ratio in 2015	JPM	8/6/14

EXHIBIT 10B
2014 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category 2	Quotations	Report	Date
All	Other	Management exhausted the \$2b buyback the board authorized last year on May 6 and continued buying back shares under the new \$1b program authorized on Feb 24 of this year, albeit at a slower pace now that the share price has almost rebounded back to pre-dividend cut levels. We expect the buyback to continue and model \$150m/quarter from here as the company takes a more opportunistic approach to the buyback. As a result, we estimate the 2015 payout ratio would be 55% on \$7.1b in EBITDA – a sustainable level.	JPM	8/6/14
All	Other	FCF (\$677M) beat our estimate by \$27M, mostly from lower capex (~\$20M). Strategic revenue was +5.1% Y/Y, a 70 bps Y/Y improvement. Broadband adds (-2k) missed our +10k estimate, but management attributed the weakness to normal seasonality.	MS	8/7/14
All	Other	REIT Potential	MS	8/7/14
All	Other	Regarding potential REIT conversion, CenturyLink echoed prior comments by Frontier management on Windstream's REIT plans saying that they will monitor the proposed transaction as it moves forward, and that they continually evaluate various structures.	MS	8/7/14
All	Other	M&A	MS	8/7/14
All	Other	CTL reported solid Q2'14 results characterized by better revenue, EBITDA and EPS. The company seems to be in somewhat “wait and see” mode as to the REIT structure which WIN announced last week. Consistent with our recent trip to Monroe, management seemed to be more inclined to pursue M&A than we had heard in recent quarters. With many deals being done around it, we would not be surprised to see the company act sooner vs. later.	WF	8/6/14
All	Revenue, Margins, and Profits	CTL delivered a solid quarter, outperforming on key financial and operating metrics. However, the beat was driven by CPE/Other revenue as Core revenue was in-line. EBITDA margins were 40 bps above our expectation, driven by seasonally lower SG&A. While we are encouraged by improving legacy trends, we continue to anticipate margin and FCF pressure as legacy declines likely continue to outweigh strategic services growth into 2015.	Jffrs	8/7/14
All	Revenue, Margins, and Profits	Maintain Underperform Given Challenging FCF Trends	Jffrs	8/7/14

EXHIBIT 10B**2014 Q2 Earnings Release Analyst Reports Major Themes**

Category 1	Category 2	Quotations	Report	Date
All	Revenue, Margins, and Profits	While CenturyLink is expected to easily meet full year financial expectations, we remain cautious as low- to midsingle digit EBITDA declines are driving a double digit reduction in free cash flow with accelerating declines expected in 2015 as cash taxes ramp meaningfully. Additionally, slower legacy revenue declines are not a viable long-term investment case. With a dividend yield of 5.6%, we see better value in names offering a more attractive growth profile. We maintain our Underperform rating and \$25 price target.	Jffrs	8/7/14
All	Revenue, Margins, and Profits	Revenue and EBITDA both better despite higher CPE and PrismTV costs	JPM	8/6/14
All	Revenue, Margins, and Profits	2Q14 revenue of \$4.541b was much better than our \$4.487b from better growth in strategic revenues (core revenue was at the high-end of guidance), data integration, and data hosting strength. EBITDA also came in much better at \$1.813b on 39.9% margin vs. our \$1.773b and 39.5% despite increased CPE sales, higher PrismTV related expenses, and greater USF contribution. We expect the higher level of expenses to persist through the year.	JPM	8/6/14
All	Revenue, Margins, and Profits	With business strategic revenue growth accelerating to 7.8% y/y in Q2 vs. 6.7% for Q1, CTL remains our favorite large-cap name among service providers. We continue to believe that the enterprise space is benefiting from cyclical and secular tailwinds and T and VZ remain focused on consumer wireless and fiber activities. We believe that CTL offers stable to improving fundamentals, wellsupported yield, a large buyback and optionality on bonus depreciation or REIT conversion over the next several months.	Mcq	8/11/14
All	Revenue, Margins, and Profits	CenturyLink posted adj. EPS of \$0.72 (vs. Mse \$0.66 and consensu \$0.64). Strategic services was a source of strength, and CPE sales were also higher than expected. Strategic revenues is now 56% of core revenues vs. 50% two years ago.	MS	8/7/14
All	Revenue, Margins, and Profits	2Q Key Highlights	MS	8/7/14
All	Revenue, Margins, and Profits	What We Did Not Like	MS	8/7/14

EXHIBIT 10B
2014 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category 2	Quotations	Report	Date
All	Revenue, Margins, and Profits	-EBITDA margins rebounded from 1Q, but still below 40%. -CPE sales were strong, but likely pulled forward from 2H.	MS	8/7/14
All	Revenue, Margins, and Profits	Solid Q2 Results	WF	8/6/14
All	Revenue, Margins, and Profits	CTL reported Q2 total revenue, Adjusted EBITDA and Adjusted Diluted EPS of \$4.541B, \$1.813B and \$0.72 vs. our \$4.486B, \$1.763B and \$0.64 estimates. Top line growth was driven by Strategic and Data integration segments which were up 6.2% and 12.0% y/y, respectively, and offset the decline in Legacy services which were down -7.3% y/y.	WF	8/6/14
All	Other	While CenturyLink is happy with their current strategic positioning, they are open to making acquisitions, primarily in the areas of metro fiber, broadband and data hosting.	MS	8/7/14
Consumer	Subscribers	CTL also added 16k PrismTV subs in the quarter, bringing the total subscriber base to 216k, while offering service to an additional 60k homes.	JPM	8/6/14
Consumer, Business	Guidance and Forecasts	In our view, this exemplifies the challenges CenturyLink faces as high margin legacy revenue declines continue to outpace growth in strategic services on an absolute dollar basis. We expect this trend to continue into 2015, providing hope that an EBITDA inflection could come in 2016, though we continue to model modest margin deterioration.	Jffrs	8/7/14
Consumer, Business	Guidance and Forecasts	We expect operating trends to continue to move in the right direction this year and look to exit 2014 at a -4.7% run-rate on access lines and +129k annual broadband sub growth for all of 2014 vs. our previous -5.0% and +126k.	JPM	8/6/14
Consumer, Business	Revenue, Margins, and Profits	CPE Drives Revenue Outperformance	Jffrs	8/7/14
Consumer, Business	Revenue, Margins, and Profits	Total revenue of \$4.54bn was modestly above our/Street estimates of \$4.52/\$4.50, representing 0.4% growth from a year ago. The beat was largely driven by Data Integration (i.e. CPE) and Other revenue as Core revenue matched our forecast.	Jffrs	8/7/14
Consumer, Business	Revenue, Margins, and Profits	EBITDA Beats, but Margins Remain Pressured	Jffrs	8/7/14

EXHIBIT 10B**2014 Q2 Earnings Release Analyst Reports Major Themes**

Category 1	Category 2	Quotations	Report	Date
Consumer, Business	Revenue, Margins, and Profits	Despite the lower margin attached to CPE, EBITDA of \$1.81bn was 1.5%/2.2% above our/Street forecasts, though non-recurring benefits likely accounted for half the beat. While the 39.9% margin was above our forecast, the results reflect a 120-bp decline from a year ago; YTD margins are down 220 bps.	Jffrs	8/7/14
Consumer, Business	Revenue, Margins, and Profits	Revenue growth from both the consumer and business segments outstripped our expectations. EBITDA was also better even as operating expenses rose significantly from CPE sales and the PrismTV rollout. 3Q14 guidance implies lower margins q/q and is below our previous EBITDA estimate even with inline revenue guidance.	JPM	8/6/14
Consumer, Business	Revenue, Margins, and Profits	What We Liked	MS	8/7/14
Consumer, Business	Revenue, Margins, and Profits	-Total revenue beat our estimate, and growth turned positive (+0.4%) vs. a -1.9% decline in 2Q13. -Strategic services revenue +5.5% Y/Y, now ~56% of core revenue mix -Legacy Revenue decline slowed -Consumer revenue growth driven by price increases and improved churn.	MS	8/7/14
Consumer, Business	Subscribers	CenturyLink delivered a strong 2Q14 with better-than-expected broadband sub and voice access line losses.	JPM	8/6/14
Consumer, Business	Subscribers	Broadband and voice both better than expected	JPM	8/6/14
Consumer, Business	Subscribers	Access line losses in 2Q were better than our estimate at a 4.7% decline y/y vs. our 5.4% and 5.0% in 1Q. Broadband net losses were also better at -2k vs. our -5k but below consensus of +1.2k adds.	JPM	8/6/14
Consumer, Business, Wholesale	Revenue, Margins, and Profits	Consumer revenue of \$1.50B was ahead of our \$1.46B estimate and up 0.4% y/y, and Business revenue of \$1.56B beat our \$1.53B est. Data Hosting revenue was \$358MM and Wholesale revenue was \$866MM. The company added 16K Prism TV customers, slightly ahead of our 15K estimate, but lost -2K broadband subscribers in a seasonally weak quarter (-6K in Q2'13). Q2 capex was \$731MM vs. our \$718MM est.	WF	8/6/14

Notes:

[1] Analyst reports were selected from the top four or five brokers and investment banks who most consistently issued reports on CenturyLink. The reports immediately following each earnings release were selected

EXHIBIT 10B

2014 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category 2	Quotations	Report	Date
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[2] Bolded Text indicates that the entry was the heading of a section within the analyst report.

EXHIBIT 11A
EARNINGS RELEASE DATA - 2014, Q4

PR Section	Segment	Metric	Period	Value	Units	Trend	Quote
H/B	All	Op. Rev.	Q	4.44	\$B	down	Achieved operating revenues of \$4.44 billion, including core revenues of
		Core Rev.		4.05		down	\$4.05 billion in fourth quarter;
H/B	All	Op. Rev.	A	18	\$B	down	Full-year 2014 operating revenues of \$18.0 billion, a 0.4% decline from full-year 2013
H/B	All	Op. Cash Flow	Q	1.71	\$B	down	Generated operating cash flow of \$1.71 billion, excluding special items, in fourth quarter
H/B	All	Op. Cash Flow	A	7.1	\$B	down	Full-year 2014 operating cash flow, excluding special items, of \$7.1 billion [...] driven by the reduction in higher-margin legacy and private line revenues, which was partially offset by growth in other strategic revenues.
H	All	Free Cash Flow	Q	373	\$M		Generated free cash flow, excluding special items and integration-related capital expenditures, of \$373 million in fourth quarter and \$2.7 billion in full-year 2014
			A	2.7	\$B		
H/B	All	Adj. Net Income	Q	340	\$M	down	Achieved Adjusted Net Income of \$340 million and Adjusted Diluted EPS of \$0.60, excluding special items, in fourth quarter
		Adj. Diluted EPS		0.60	\$	down	
H/B	All	Broadband Customers	Q	6.08	million subscribers	up	Added approximately 18,600 high-speed Internet customers and nearly 12,900 Prism TM TV customers during fourth quarter
		Prism TV Customers		240,000	subscribers	up	
B	All	Adj. Net Income	A	1.49	\$B	down	
B	All	Adj. Diluted EPS	A	2.61	\$	down	
B	All	Net Income (GAAP)	Q	188	\$M	down	
B	All	Diluted EPS (GAAP)	Q	0.33	\$	down	

EXHIBIT 11A
EARNINGS RELEASE DATA - 2014, Q4

PR Section	Segment	Metric	Period	Value	Units	Trend	Quote
B	All	Net Income (GAAP)	A	772	\$M	up	
B	All	Diluted EPS (GAAP)	A	1.36	\$	up	
B	Business	Strategic Rev.	Q	1.58	\$B	up	driven by strength in high-bandwidth offerings such as MPLS, Ethernet and Wavelength services, partially offset by declines in low-speed data services revenue.
B	Business	Total Rev.	Q	2.70	\$B	down	as lower legacy, private line and data integration revenues were partially offset by growth in high-bandwidth offerings.
B	Business	Managed Hosting Rev.	Q	145	\$M	up	
B	Business	Colocation Rev.	Q	160	\$M	up	
B	Consumer	Strategic Rev.	Q	727	\$M	up	
B	Consumer	Total Rev.	Q	1.49	\$B		
B	Consumer	Penetration of Addressable Homes	Q	10.2	percent	up	
G	All	Capital Expend.	A	3.0	\$B		
G	All	Op. Rev.	A	17.9 - 18.1	\$B		
G	All	Core Rev.	A	16.25 - 16.45	\$B		
G	All	Op. Cash Flow	A	6.8 - 7.0	\$B		
G	All	Adj. Diluted EPS	A	2.50 - 2.70	\$		
G	All	Free Cash Flow	A	2.5 - 2.7	\$B		
G	All	Op. Rev.	Q	4.45 - 4.50	\$B		

EXHIBIT 11A
EARNINGS RELEASE DATA - 2014, Q4

PR							
Section	Segment	Metric	Period	Value	Units	Trend	Quote
G	All	Core Rev.	Q	4.04 - 4.09	\$B		
G	All	Op. Cash Flow	Q	1.64 - 1.69	\$B		
G	All	Adj. Diluted EPS	Q	0.56 - 0.61	\$		
Number of Reported Values:				34	Trend:	9 12	Up Down

EXHIBIT 11B**2014 Q4 Earnings Release Analyst Reports, Major Themes*****Major Themes***

- Most of the analysts in the reviewed reports made note of the fact that CTL was slowing the pace of stock buybacks. (4/5)
- CTL's decision to reorganize its sales force was seen positively by most analysts with Bank of America Merrill Lynch suggesting that CTL should be able to benefit from more cost efficiencies. (4/5)
- More than half of the reviewed analyst reports pointed to CTL's lower revenues and EBITDA, and expressed concern over competitive pressure in hosting and other business services. (3/5)

Category1	Category2	Quotations	Report	Date
All	Buyback	The company spent \$91m to repurchase shares during the 4Q compared to our estimate of \$250m but an increase from \$64mn in 3Q. Management noted that the company has been more active in the markets so far this year, repurchasing ~\$75mn worth of shares in January and confirmed it will complete the \$1bn buyback plan by May 2016.	BoA	2/17/15
All	Buyback	Buyback in the quarter totaled \$91m, or 2.3m shares, and the company has done another \$75m in January. We expect the buyback pace to pick up a little from the anemic pace the last few quarters if management expects to complete it within the guided timeframe.	JPM	2/11/15
All	Buyback	Buyback expected to pick up this year; we model a 48% payout ratio in 2015.	JPM	2/11/15
All	Buyback	The company spent \$91m on 2.3m shares (average of \$39.57/share) and ended 2014 with ~\$800m remaining under the \$1b program authorized on Feb 24, 2014, and initiated near the end of May 2014.	JPM	2/11/15
All	Buyback	We expect the heightened buyback pace to continue as management aims to complete the authorization within the 18 months.	JPM	2/11/15
All	Buyback	The stock buyback increased Q/Q to \$91M (from \$64M in 3Q14) but the pace slowed meaningfully from 1H14 (\$479M) as the rising stock price caused management to be less aggressive with the buyback.	M S	2/12/15
All	Guidance and Forecasts	A plan to ramp through '15 on go to market restructuring	BoA	2/17/15

EXHIBIT 11B

2014 Q4 Earnings Release Analyst Reports, Major Themes

Category1	Category2	Quotations	Report	Date
All	Guidance and Forecasts	the company is currently going through a reorganization which should allow it to mine out more cost efficiencies.	BoA	2/17/15
All	Guidance and Forecasts	All told, the company should exit '15 on track for a stable to positively inflecting total business heading into '16 which we believe is a positive surprise for the market.	BoA	2/17/15
All	Guidance and Forecasts	Revenue stability should come in 2015	BoA	2/17/15
All	Guidance and Forecasts	Our PO, which has an assumed yield of 5.1%, reflects the company's improving top-line trajectory and betterthan-average dividend coverage.	BoA	2/17/15
All	Guidance and Forecasts	2015 Guide Inline, Though Ramp Worth Monitoring.	Jffrs	2/12/15
All	Guidance and Forecasts	Revenue guidance for 1Q and FY were inline with improvement expected in 2H15 given the potential disruption from a recent realignment.	Jffrs	2/12/15
All	Guidance and Forecasts	On the call though, management focused on the potential that 2015 revenue could grow through the year with strength expected to build in the second half.	JPM	2/11/15
All	Guidance and Forecasts	2015 revenue guidance in-line with our previous estimate but EBITDA below.	JPM	2/11/15
All	Guidance and Forecasts	Management also provided 1Q15 guidance of \$4.45-4.50b in revenue and \$1.64-1.69b in EBITDA, both of which are below our previous estimates, as the weakness in 4Q drags into 1Q.	JPM	2/11/15
All	Guidance and Forecasts	1Q15 guidance below our previous estimates.	JPM	2/11/15
All	Guidance and Forecasts	Management also provided 1Q15 guidance of \$4.45-4.50b in revenue and \$1.64-1.69b in EBITDA, both of which are below our previous estimates, as the weakness in 4Q drags into 1Q.	JPM	2/11/15
All	Guidance and Forecasts	We maintain an Overweight rating on CenturyLink as the improving revenue and EBITDA profile, relatively low leverage of 2.9x EBITDA, a solid and sustainable dividend yield, and steady buyback make CTL shares the most attractive among our telecom stocks today, in our view	JPM	2/11/15
All	Guidance and Forecasts	Action and recommendation	Mcq	2/18/15
All	Guidance and Forecasts	While we expect the Sept. sales force reorg to begin to bear fruit in Q1 and especially Q2, we think that CTL shares are lacking a catalyst	Mcq	2/18/15

EXHIBIT 11B

2014 Q4 Earnings Release Analyst Reports, Major Themes

Category1	Category2	Quotations	Report	Date
All	Guidance and Forecasts	2015 Outlook in-line with expectations	MS	2/12/15
All	Guidance and Forecasts	Management kept their 2015 outlook roughly unchanged from 2014. Operating Revenue, Core Revenue, and Capex were left unchanged from 2014 at \$18.0B, 16.35B, and \$3B, respectively.	MS	2/12/15
All	Guidance and Forecasts	CenturyLink kept both total and core revenue guidance unchanged from 2014.	MS	2/12/15
All	Other	Elevated Payout in 2016.	Jffrs	2/12/15
All	Other	...this implies a dividend payout well above prior established targets (60%). With continued legacy pressure, and increasing cash taxes likely, we remain cautious on CTL shares.	Jffrs	2/12/15
All	Other	Impact	Mcq	2/18/15
All	Other	Given earlier press reports that CTL was looking at the VZ assets and with no breakup fee on the VZ/FTR deal , we are surprised that the market is not discussing a potential counterbid from CTL as the deal (at \$11.5bln) would be 23- 24% accretive to CTL on '17 and '18 FCF/sh.	Mcq	2/18/15
All	Other	AT&T data center deal may not be as likely as we thought as CTL is running at just 62% utilization globally on its 58 data centers. We feel mgmt. does not want to add more real estate.	Mcq	2/18/15
All	Other	CenturyLink completed the realignment of its organizational structure and will now report two segments: Business... and Consumer	MS	2/12/15
All	Revenue, Margins, and Profits	the company reported revenue in line with consensus but EBITDA light. CTL's updated cash tax guidance for 2015 of \$25mn-\$50mn, down from \$100mn-\$150mn, should help its already strong dividend coverage, with the possibility for it to continue in 2016 if Congress once again extends bonus tax depreciation.	BoA	2/17/15
All	Revenue, Margins, and Profits	Soft Financial Quarter.	Jffrs	2/12/15
All	Revenue, Margins, and Profits	Total revenue of \$4.44bn was 0.7%/0.8% below our/Street expectations driven by weaker Core revenue.	Jffrs	2/12/15

EXHIBIT 11B

2014 Q4 Earnings Release Analyst Reports, Major Themes

Category1	Category2	Quotations	Report	Date
All	Revenue, Margins, and Profits	Legacy Headwinds Remain.	Jffrs	2/12/15
All	Revenue, Margins, and Profits	We are concerned that reported financials understate exposure to declining legacy revenue by treating 10% Y/Y declining low-bandwidth data services (private line and high-speed Internet revenue, including DSL/T1/DS3) as Strategic. Reassigning this revenue increases exposure to legacy revenue from 44% to 58% for 2014.	Jffrs	2/12/15
All	Revenue, Margins, and Profits	EBITDA was also lower as operating margins were pressured by continued loss of high margin legacy revenues and one-time expenses.	JPM	2/11/15
All	Revenue, Margins, and Profits	EBITDA came in light at \$1.709b on 38.5% margin vs. our \$1.751b and 39.1% as a result of the loss of higher margin legacy access and private line business on top of higher employee related costs.	JPM	2/11/15
All	Revenue, Margins, and Profits	Results were below consensus/our expectations.	MS	2/12/15
All	Taxes	Though 4Q proved somewhat weaker, CTL's 2015 guidance was largely inline with expectations. Thus, estimates are unlikely to shift meaningfully, though investors must have faith in the implied improvement throughout the year. The 2016 cash tax outlook could raise some eyebrows, though we caution the run rate is likely 25% lower, alleviating potential payout risks. We remain cautious amid legacy revenue declines, where exposure may be understated.	Jffrs	2/12/15
All	Taxes	management alluded to cash taxes of \$1.2-1.3bn in 2016, of which ~\$300mn will be related to 2015.	Jffrs	2/12/15
All	Taxes	CTL mgmt. has given good transparency into expected cash taxes for 2016 (\$900m to \$1bln +\$300m in '15 carryovers) and beyond \$1bln+. In the absence of a tax-optimizing deal or tax reform, we believe higher cash taxes will limit CTL's ability to repurchase shares in 2016, though the dividend remains well-covered.	Mcq	2/18/15
Business	Guidance and Forecasts	We expect the higher level of expenses to persist into 2015 as higher facility costs (primarily from off-network expenses) are slightly offset by lower personnel costs and operating synergies as a result of the reorganization of the business segment and sales force.	JPM	2/11/15

EXHIBIT 11B

2014 Q4 Earnings Release Analyst Reports, Major Themes

Category1	Category2	Quotations	Report	Date
Business	Revenue, Margins, and Profits	Core and total revenue weaker as solid consumer revenue was offset by weak business revenue; EBITDA margin light due to loss of higher margin revenue.	JPM	2/11/15
Business	Revenue, Margins, and Profits	4Q14 revenues were impacted by higher credits and churn in the data center segment.	MS	2/12/15
Business	Subscribers	Management expects the weakness in the business segment, particularly in the high-bandwidth data services and hosting services segments, to carry into 1Q15, with gradual improvements throughout the year as the reorganization takes effect, culminating in strong growth in the latter half of the year.	JPM	2/11/15
Consumer, Business	Revenue, Margins, and Profits	CenturyLink's revenue and EBITDA were modestly below our/Street estimates. Relative to our expectations, Consumer was stronger, while Business (now incl. Wholesale/Hosting) was weaker. Broadband additions of 18.6k were inline. Reported FCF missed on lower EBITDA and higher capex. Guidance for 2015 was inline, reflecting relatively flat revenue, a ~2% EBITDA decline, and a ~3% FCF drop.	Jffrs	2/11/15
Consumer, Business	Revenue, Margins, and Profits	Excluding a 1x settlement benefit, Consumer was inline, while disappointing Hosting results contributed to weaker Business performance.	Jffrs	2/12/15
Consumer, Business	Revenue, Margins, and Profits	Revenue growth from the consumer side was better while the newly reorganized business segment came in below.	JPM	2/11/15
Consumer, Business	Revenue, Margins, and Profits	in-line performance in the consumer segment (excluding the one time gain of \$10m) was more than offset by weaker business and hosting performance.	JPM	2/11/15
Consumer, Business	Subscribers	CTL reported subscriber metrics that were in line during the quarter with DSL net adds above our estimate (+18.6k vs. our +18k) while PrismTV added +13k, bringing up its subscriber count to 240k.	BoA	2/17/15
Consumer, Business	Subscribers	Voice and broadband in-line, but PrismTV adds slower.	JPM	2/11/15
Consumer, Business	Subscribers	PrismTV added 12.9k subs in the quarter vs. our 20k and the company continues to guide to further rollouts this year but haven't specified timing or markets.	JPM	2/11/15

EXHIBIT 11B**2014 Q4 Earnings Release Analyst Reports, Major Themes**

Category1	Category2	Quotations	Report	Date
Consumer, Business	Subscribers	Event	Mcq	2/18/15
Consumer, Business	Subscribers	Following another ho-hum qtr. for CTL plagued by the same recurring issues: churn in colo, pricing pressure in hosting, private line and FTTC, we feel like the stock is in need of a non-operational catalyst	Mcq	2/18/15
Consumer, Business	Subscribers	HSI results were light for the third consecutive quarter.	MS	2/12/15
Consumer, Business	Subscribers	Aggregate 2014 broadband adds totaled 90.6K, vs. +140.0K in 2013, a 35% decrease. CenturyLink also added 12.9K Prism TV customers in 4Q, and ended the year with more than +240K Prism customers.	MS	2/12/15

Notes:

[1] Analyst reports were selected from the top four or five brokers and investment banks who most consistently issued reports on CenturyLink. The reports immediately following each earnings release were selected

[2] Bolded Text indicates that the entry was the heading of a section within the analyst report.

EXHIBIT 12A
EARNINGS RELEASE DATA - 2015, Q2

PR Section	Segment	Metric	Period	Value	Units	Trend	Quote
H/B	All	Op. Rev.	Q	4.42	\$B	down	Operating revenues for second quarter 2015 were \$4.42 billion compared to \$4.54 billion in second quarter 2014. The strength in Consumer strategic revenues partially offset the declines in low bandwidth data services and data integration revenues, as well as the decline in legacy revenues ⁴ primarily driven by access line losses, lower long distance revenues and the continued decline in access revenues. The growth of strategic revenues was primarily due to continued business customer demand for high-bandwidth data services, along with year-over-year growth in high-speed Internet and CenturyLink® Prism™ TV customers and select price increases.
H/B	All	Core Rev.	Q	4.02	\$B		Achieved core revenues of \$4.02 billion in second quarter 2015
H/B	All	Op. Cash Flow	Q	1.62	\$B	down	Operating cash flow (as defined in our attached supplemental schedules), excluding special items, decreased to \$1.62 billion from \$1.81 billion in second quarter 2014.
H/B	All	Free Cash Flow	Q	562	\$M		Generated free cash flow, excluding special items, of \$562 million
H/B	All	Adj. Net Income	Q	308	\$M	down	Excluding the items outlined above, CenturyLink's Adjusted Net Income for second quarter 2015 was \$308 million compared to Adjusted Net Income of \$408 million in second quarter 2014.
H/B	All	Adj. Diluted EPS	Q	0.55	\$	down	Second quarter 2015 Adjusted Diluted EPS was \$0.55 compared to \$0.72 in the year-ago period due to lower operating cash flow partially offset by lower depreciation and amortization and the impact of the lower number of shares outstanding due to share repurchases since second quarter 2014.
H/B	All	Prism TV Customers	Q	258,000	subscribers	up	Added approximately 8,400 CenturyLink® Prism™ TV customers during second quarter 2015, ending the period with approximately 258,000 customers.
B	Business	Sequential Growth in Sales	Q	15	percent		For example, the improvement in sales to business customers that began in March continued throughout the quarter, resulting in 15% sequential growth in Business sales compared to first quarter sales.

EXHIBIT 12A
EARNINGS RELEASE DATA - 2015, Q2

PR Section	Segment	Metric	Period	Value	Units	Trend	Quote
B	Business	High-Bandwidth Data Services Rev. Growth	Q	10	percent		revenue from high-bandwidth data services provided to business customers, including MPLS3, Ethernet and Wavelength, grew more than 10% year-over-year.
B	All	High-Speed Internet Customers	Q	6.1	million subscribers	down	Ended the quarter with more than 6.1 million high-speed Internet customers, a decrease of approximately 9,200 customers in second quarter 2015 due to typical seasonality.
B	All	Shares Repurchased Value of Shares Repurchased	Q	2.5 90.0	million shares \$M		Purchased and retired an additional 2.5 million shares of CenturyLink common stock for nearly \$90 million during second quarter 2015.
B	All	Op. Expenses	Q	3.84	\$B	up	Operating expenses, excluding special items, increased to \$3.84 billion from \$3.82 billion in second quarter 2014. The year-over-year increase was primarily driven by higher employee benefit expenses, Prism™ TV and other costs, which were partially offset by lower customer premise equipment costs (related to lower data integration revenues) and lower depreciation and amortization expenses.
B	All	Op. Cash Flow Margin	Q	36.8	percent	down	For second quarter 2015, CenturyLink achieved an operating cash flow margin, excluding special items, of 36.8% versus 39.9% in second quarter 2014. These decreases were primarily driven by the decline in higher-margin legacy revenues and the higher operating expenses described above. The Company expects operating cash flow margins to improve in the second half of 2015 compared to second quarter 2015.
B	All	Net Income (GAAP)	Q	143	\$M	down	Under generally accepted accounting principles (GAAP), net income for second quarter 2015 was \$143 million compared to a net income of \$193 million for second quarter 2014
B	All	Diluted EPS (GAAP)	Q	0.26	\$	down	diluted earnings per share was \$0.26 for second quarter 2015 compared to \$0.34 for second quarter 2014.

EXHIBIT 12A
EARNINGS RELEASE DATA - 2015, Q2

PR Section	Segment	Metric	Period	Value	Units	Trend	Quote
B	Business	High-Bandwidth Data Services Rev. Growth (Retail)	Q	12.5	percent		High-bandwidth data services revenues from retail business customers grew 12.5% year-over-year.
B	Business	Strategic Rev.	Q	1.57	\$B	down	Strategic revenues were \$1.57 billion in the quarter, a 0.4% decrease from second quarter 2014, primarily due to continued declines in lowbandwidth data services.
B	Business	Total Rev.	Q	2.66	\$B	down	Total revenues were \$2.66 billion, a decrease of 4.6% from second quarter 2014, due to lower legacy, low-bandwidth data services and data integration revenues, which were partially offset by growth in high-bandwidth revenues.
B	Business	Business Segment Margin	Q	42.6	percent	down	Business segment margin declined to 42.6% from 45.6% a year ago primarily due to the continued decline in legacy and low-bandwidth data services revenue, along with higher sales employee-related expenses.
B	Consumer	Strategic Rev.	Q	758	\$M	up	Strategic revenues were \$758 million in the quarter, a 6.9% increase over second quarter 2014.
B	Consumer	Total Rev.	Q	1.5	\$B	flat	Total revenues were \$1.50 billion for second quarter 2015, flat compared to second quarter 2014.
G	All	Op. Rev. Core Rev. Op. Cash Flow Adj. Diluted EPS	Q	4.42 - 4.47 4.02 - 4.07 1.62 - 1.67 0.53 - 0.58	\$B \$		The Company anticipates the potential incremental impact of CAF Phase 2 on the guidance provided above to be an additional \$20-\$150 million of operating revenues and operating cash flow and an additional \$0.03-\$0.16 of Adjusted Diluted EPS in third quarter 2015, with the actual amounts to be determined by the ultimate level of CAF Phase 2 funding accepted by the Company.

EXHIBIT 12A
EARNINGS RELEASE DATA - 2015, Q2

PR Section	Segment	Metric	Period	Value	Units	Trend	Quote
G	All	Op. Rev.	A	17.7 - 17.9	\$B	up	Previous Guidance: \$17.9 to \$18.1 billion; The Company anticipates the potential incremental impact of CAF Phase 2 on the guidance provided above to be an additional \$50-\$200 million of operating revenues and operating cash flow and an additional \$0.05-\$0.21 of Adjusted Diluted EPS.
		Core Rev.		16.1 - 16.25		up	
G	All	Op. Cash Flow	A	6.7 - 6.85	\$B	up	Previous Guidance: \$6.8 to \$7.0 billion; The Company anticipates the potential incremental impact of CAF Phase 2 on the guidance provided above to be an additional \$50-\$200 million of operating revenues and operating cash flow and an additional \$0.05-\$0.21 of Adjusted Diluted EPS.
G	All	Adj. Diluted EPS	A	2.35 - 2.55	\$	up	Previous Guidance: \$2.50 to \$2.70; The Company anticipates the potential incremental impact of CAF Phase 2 on the guidance provided above to be an additional \$50-\$200 million of operating revenues and operating cash flow and an additional \$0.05-\$0.21 of Adjusted Diluted EPS.
G	All	Free Cash Flow	A	2.5 - 2.7	\$B		Since any significant capital expenditures related to the CAF Phase 2 program are not expected to begin until 2016, the Company also expects an additional \$30-\$115 million of free cash flow in full-year 2015, with the actual amounts to be determined by the ultimate level of CAF Phase 2 funding accepted by the Company.
G	All	Capital Expend.	A	~ 2.8	\$B	up	Previous Guidance: ~ \$3.0 billion; Since any significant capital expenditures related to the CAF Phase 2 program are not expected to begin until 2016, the Company also expects an additional \$30-\$115 million of free cash flow in full-year 2015, with the actual amounts to be determined by the ultimate level of CAF Phase 2 funding accepted by the Company.

EXHIBIT 12A
EARNINGS RELEASE DATA - 2015, Q2

PR							
Section	Segment	Metric	Period	Value	Units	Trend	Quote
Other	Estimated	Connect		>300	\$M		At this time, CenturyLink estimates that it will accept at least \$300 million of the available support and continues to evaluate the remaining opportunity for support funding of approximately \$200 million. The Company expects to complete its financial evaluation and notify the FCC of its ultimate decision on the level of support funding on or before the August 27, 2015 FCC notification deadline. In markets where the Company accepts the CAF Phase 2 funding, net distributions are expected to begin in September or October 2015 and will be retroactive to the first of the year.
	CAF	America Fund					
	Funding	Phase 2 Funding					
Number of Reported Values:				33	Trend:	8 Up 11 Down	

EXHIBIT 12B**2015 Q2 Earnings Release Analyst Reports Major Themes*****Major Themes***

- Revenue and EBITDA came in below estimates. Morgan Stanley suspected wholesale pressure and disruptions due to reorg could have been the cause. (5/5)
- CTL guiding to flat 3Q revenue and EBITDA with ramping in 4Q. Low estimates are likely pressuring stock down. J.P. Morgan is lowering its '16 price target as result of the low guidance from. Jefferies analysts expressed skepticism about 4Q ramping. (4/5)
- CTL planning to accept at least \$300m in funding from CAF program, which would raise revenue, EBITDA and free cash flow in 2H'15. The long run impact of this is less clear. (4/5)
- Some analysts mentioned an extension of bonus depreciation could have an impact. J.P Morgan speculated that this could reduce CTL's payout ratio from 90% to 60%. (3/5)

Category1	Category2	Quotations	Report	Date
All	CAF	Revenue, EBITDA and FCF estimates going up on CAF	BoA	8/5/15
All	CAF	CenturyLink believes it will take at least \$300m of the \$514m offered to it while the company is still evaluating the opportunity to take the remaining ~\$214m.	BoA	8/5/15
All	CAF	CTL believes CAF will add an additional \$50 -200m in revenue and EBITDA for the full year while it does not expect to incur any significant capex with the program until 2016 and as such FCF will rise \$30-\$115m for the back half of the year as well.	BoA	8/5/15
All	CAF	Once Street models account for new CAF funding, as we have, estimates should actually rise.	BoA	8/6/15
All	CAF	CTL has yet to officially declare the amount of funding it will receive from the CAF program, but said that it would accept at least \$300m of the \$514m opportunity. The company notes that CAF may provide an additional \$50 -200m of revenue (we assume only \$100m) and EBITDA and \$30 - 115m of incremental free cash flow in 2015, while not incurring significant related capex in 2015. CTL reiterated FCF guidance before CAF funding, so FCF estimates will be rising as well, boosting dividend coverage.	BoA	8/6/15

EXHIBIT 12B

2015 Q2 Earnings Release Analyst Reports Major Themes

Category1	Category2	Quotations	Report	Date
All	CAF	CAF-II Could Provide Modest Lift to 2015, Less Clear Beyond.	Jffrs	8/6/15
All	CAF	management expects to accept at least \$300mn of the \$514mn offered.	Jffrs	8/6/15
All	Guidance and Forecasts	Revenue guidance implies flat to ramping top line in 2H	BoA	8/5/15
All	Guidance and Forecasts	Assuming CTL is taking a more conservative cut at its guidance with the revenue midpoint lower by \$200m but only \$40m below the Street consensus (implying estimates are unlikely to fall that much), the very low end of guidance of \$17.7bn and the very low end of 3Q guidance of \$4.42 billion implies that 2H revenue will flatten out.	BoA	8/5/15
All	Guidance and Forecasts	The midpoint of full year and 3Q guidance now implies a strong 3Q vs. 2Q and 4Q vs 3Q ramp into the back part of the year. The key question will be will this trajectory extend into 2016 and create the revenue inflection we expect?	BoA	8/5/15
All	Guidance and Forecasts	The company noted it exited 2Q with a strong and growing funnel of new business. and we maintain our Buy rating.	BoA	8/5/15
All	Guidance and Forecasts	EBITDA also inflecting positively in 2H	BoA	8/5/15
All	Guidance and Forecasts	Again assuming the midpoint of the companys' new guidance, EBITDA will also inflect positively in the second half of the year.	BoA	8/5/15
All	Guidance and Forecasts	The company is highlighting a revenue u-turn and cost controls to support the EBITDA expectation.	BoA	8/5/15
All	Guidance and Forecasts	The company is guiding to flat FCF before the impact of new CAF funding.	BoA	8/5/15
All	Guidance and Forecasts	Our price objective of \$42 is based on our relative dividend yield analysis and supported by our stand-alone DCF. From our analysis, the company is currently undervalued and offers an attractive dividend yield in the context of below average 2014 FCF payout	BoA	8/5/15
All	Guidance and Forecasts	Our PO of \$42 is also based on a 5.9x 2015E EV/EBITDA multiple, in line with the RLEC avg. and conservative in our view given the proximity of positive revenue inflection and a superior collection of RLEC assets	BoA	8/5/15

EXHIBIT 12B

2015 Q2 Earnings Release Analyst Reports Major Themes

Category1	Category2	Quotations	Report	Date
All	Guidance and Forecasts	Growth coming in 2H into 2016, FCF higher, Div secure	BoA	8/6/15
All	Guidance and Forecasts	While CTL lowered full-year guidance to approximately where Street estimates already were, following a fairly clear heads-up at the June analyst day, the company's exit rate out of 2Q has led the company to call 2H15 as the inflection point heading into 2016, where Y/Y topline growth can emerge.	BoA	8/6/15
All	Guidance and Forecasts	The new 2015 revenue midpoint is only ~\$40m below current consensus, primarily because of a 1x contract renegotiation, not some new secular trend.	BoA	8/6/15
All	Guidance and Forecasts	Using the midpoint of full-year guidance, EBITDA will inflect in the back half, based on a positive revenue trajectory and a reduction in costs, which the company plans to reduce by ~\$125m in the second half of the year after employee costs rose unexpectedly in 2Q.	BoA	8/6/15
All	Guidance and Forecasts	While the 2016 dividend payout is going to be inflated due to its tax strategy (as we've written about before), we are more confident in its dividend after : 1) increased FCF and 2) management's dividend affirmation.	BoA	8/6/15
All	Guidance and Forecasts	Updating estimates for a better 2H15	BoA	8/6/15
All	Guidance and Forecasts	Our 2015 revenue estimate of \$17.87b includes \$100 million of CAF II funding and USF catch-up payments, and compares to our previous \$17.86b. Our adj. EBITDA goes to \$6.842b from \$6.837b, again on the new CAF funding flowing through from revenue. Our full-year adj. EPS estimate is \$2.48 vs. our previous \$2.47, net of CTL's less-aggressive buyback in 2Q and the benefit of new funding.	BoA	8/6/15
All	Guidance and Forecasts	We reiterate our Buy rating, and our PO of \$42 is based on a 6.1x 2016 EV/EBITDA multiple, marginally higher than CTL's RLEC peers, but appropriate, given its better collection of assets and proximity to revenue and EBITDA stability.	BoA	8/6/15

EXHIBIT 12B

2015 Q2 Earnings Release Analyst Reports Major Themes

Category1	Category2	Quotations	Report	Date
All	Guidance and Forecasts	Our price objective of \$42 is based on a 6.1x 2016E EV/EBITDA multiple, in line with the RLEC avg. and conservative in our view given the proximity of positive revenue inflection and a superior collection of RLEC assets. Our price objective implies a dividend yield of 5.3%	BoA	8/6/15
All	Guidance and Forecasts	Reduced Guidance May Still Prove Aggressive.	Jffrs	8/6/15
All	Guidance and Forecasts	Not surprisingly, management lowered the full year revenue and EBITDA outlook to reflect the weak 1H results and a recent wholesale renegotiation	Jffrs	8/6/15
All	Guidance and Forecasts	the 3Q guide implies continued weakness, and also implies an out-of-trend 4Q, which will be met with skepticism.	Jffrs	8/6/15
All	Guidance and Forecasts	We update our CenturyLink model post the 2Q15 earnings report. Our 3Q revenue estimate goes to \$4.428b with \$1.621b in adj. EBITDA on 36.6% margin and EPS of \$0.53.	JPM	8/5/15
All	Guidance and Forecasts	We lower our year-end 2016 price target to \$30 from \$35 as a result of the lowered guidance and the pushing out of revenue stability to 2017.	JPM	8/5/15
All	Guidance and Forecasts	Further deterioration in economic fundamentals could impact revenue to the downside	JPM	8/5/15
All	Guidance and Forecasts	Action and recommendation	Mcq	8/9/15
All	Guidance and Forecasts	We recognize that many holders are upset over CTL's cost overruns in Q2, however, the stock is down over 30% off its highs and our forecasts haven't changed significantly since earlier this year.	Mcq	8/9/15
All	Guidance and Forecasts	We are lowering our TP to \$37 to account for continued disappointment on execution but we see the shares recovering somewhat tactically before year-end.	Mcq	8/9/15
All	Guidance and Forecasts	CenturyLink's lower financial guidance shouldn't come as too much of a surprise to investors after management's cautious comments at the June Analyst Day.	MS	8/6/15
All	Guidance and Forecasts	Investors struggle to invest in wireline operators over the long term given the "melting ice cube" perspective	MS	8/6/15
All	Guidance and Forecasts	nevertheless, CenturyLink's stock is already off 28% YTD (before factoring in any negative impact from 2Q15 results), and offers the second highest yield in the S&P 500.	MS	8/6/15

EXHIBIT 12B

2015 Q2 Earnings Release Analyst Reports Major Themes

Category1	Category2	Quotations	Report	Date
All	Guidance and Forecasts	The estimate reductions are likely to pressure the stock further, but if management can deliver the promised improvements in the second half of the year and bonus depreciation is extended, then the stock may be able to find some support over time.	MS	8/6/15
All	Guidance and Forecasts	Given some of the weakness in 2Q, management lowered their 2015 guidance for revenue, EBITDA and EPS, though FCF stayed the same due to \$200M decrease in expected capex. Updated guidance excludes any impact from CAF II, which should provide some relief later in 2H15.	MS	8/6/15
All	Guidance and Forecasts	What's New: lowering estimates and establishing \$31 PT (+8%)	MS	8/11/15
All	Guidance and Forecasts	We are lowering our 2015 revenue/adj. EBITDA estimates by 1%/3%, respectively, to \$17.76B and \$6.74M, near the mid-point of management's new guidance. We are lowering our strategic service revenue growth forecast from +3.3% to +2.8%, to reflect continued headwinds in the wholesale and hosting segments.	MS	8/11/15
All	Guidance and Forecasts	Given two consecutive quarters below it's long-term averages until investors gain comfort that the CenturyLink's reorganization will eventually drive revenue and EBITDA stability; however, there is likely upside to Mse/consensus once factoring in EBITDA contribution from CAF II	MS	8/11/15
All	Guidance and Forecasts	Despite the near term pressures, management reaffirmed their commitment to the dividend	MS	8/11/15
All	Guidance and Forecasts	We think the yield will provide near-term support, especially if bonus depreciation is extended, as management expects the 2016 payout ratio would fall to the 60% range (from ~90%) with bonus depreciation extension.	MS	8/11/15
All	Mergers & Acquisitions	Competitive pressures in the urban Qwest territories could pose challenges	JPM	8/5/15
All	Mergers & Acquisitions	The Qwest transaction, which closed on April 2011, has more than doubled the revenue base of the company and changed its profile to include more urban assets.	JPM	8/5/15
All	Mergers & Acquisitions	While we believe CenturyLink has done a good job with those assets thus far, the company may face challenges in improving operating metrics in these acquired properties given the high level of competition from cable and CLEC operators.	JPM	8/5/15
All	Other	Capex was reduced by \$200mn, a move solely aimed at preserving dividend confidence, in our view, though we question the business rationale as competition heats up.	Jffrs	8/6/15

EXHIBIT 12B

2015 Q2 Earnings Release Analyst Reports Major Themes

Category1	Category2	Quotations	Report	Date
All	Other	Further deterioration in economic fundamentals at the consumer or enterprise levels poses risk to access line and revenue trends as consumer markets could deteriorate from already high levels and the expected recovery in business markets could be pushed further out.	JPM	8/5/15
All	Other	This would also make it harder to gain traction with CenturyLink's video and broadband revenue growth initiatives.	JPM	8/5/15
All	Other	On the cost side, press reports CTL is cutting ~1,000 employees shortly, which should form the bulk of the \$125m in planned annual opex reductions.	Mcq	8/9/15
All	Other	We were concerned, however, with a series of issues that raise questions about execution	MS	8/6/15
All	Other	including: expense overruns, unanticipated wholesale repricing, bad debt related churn in low end broadband, and continued issues in hosting as focus on new products impacted legacy product momentum.	MS	8/6/15
All	Other	On the positive side, the company was as emphatic as ever about their commitment to the current dividend	MS	8/6/15
All	Other	level and cited a series of supportive factors including CAF II funding, likely bonus depreciation extension, cost cutting, lower capex and better 2h top line trends. The company also intends to resume their ongoing buyback program in short order.	MS	8/6/15
All	Revenue, Margins, and Profits	Revenue missed our estimate by 1bp but EBITDA was light	BoA	8/5/15
All	Revenue, Margins, and Profits	Somewhat expectedly following its analyst day, CTL reported total revenue of \$4.419b (-2.7% Y/Y) that was just below our estimate of \$4.425b and consensus of \$4.429b and compares to the guidance range of \$4.41-4.46b.	BoA	8/5/15
All	Revenue, Margins, and Profits	The company blamed higher employee costs but guided to higher margins in 2H vs. 1H. Adj. EPS of \$0.55 compares to the guidance range of \$0.59-0.64 and our estimate of \$0.59 and consensus of \$0.60.	BoA	8/5/15

EXHIBIT 12B

2015 Q2 Earnings Release Analyst Reports Major Themes

Category1	Category2	Quotations	Report	Date
All	Revenue, Margins, and Profits	Despite tempered expectations following the recent analyst day, CTL reported disappointing results and, not surprisingly, lowered full year guidance. Revenue was a marginal miss, though EBITDA was nearly 4% below forecasts. Given the slow 1H performance, revenue and EBITDA expectations were reduced 1.1% and 1.8%, respectively, though FCF was maintained on lower capex. Significant secular and execution issues remain.	Jffrs	8/6/15
All	Revenue, Margins, and Profits	EBITDA Disappoints.	Jffrs	8/6/15
All	Revenue, Margins, and Profits	Given disappointing 1H results and further risks to guidance, management announced a \$125mn expense reduction program for 2H, with the majority coming from contract labor and professional services, but also lower network expense.	Jffrs	8/6/15
All	Revenue, Margins, and Profits	As expected, high-margin legacy losses were a key contributor to weaker profitability.	Jffrs	8/6/15
All	Revenue, Margins, and Profits	given the secular decline in voice access lines, the company's revenue stream continues to move from high-margin legacy voice products to lower-margin strategic products, and we expect margin to be under meaningful pressure.	JPM	8/5/15
All	Revenue, Margins, and Profits	We maintain a Neutral rating on CenturyLink as EBITDA margins continue to decline and the payout ratio reaches 90% in 2016 without bonus depreciation, which we currently do not anticipate getting extended.	JPM	8/5/15
All	Revenue, Margins, and Profits	An extension of bonus depreciation this year would lower CenturyLink's payout ratio to 60% in 2016	JPM	8/5/15
All	Revenue, Margins, and Profits	While we currently don't anticipate bonus depreciation being extended again for 2015 as the economy continues to improve, should Congress decides to extend it, CenturyLink could see its payout ratio to go from the 90% we are currently estimating to 60% in 2016.	JPM	8/5/15
All	Revenue, Margins, and Profits	Event	Mcq	8/9/15

EXHIBIT 12B**2015 Q2 Earnings Release Analyst Reports Major Themes**

Category1	Category2	Quotations	Report	Date
All	Revenue, Margins, and Profits	While we find it disturbing that CTL missed our Q2 EBITDA estimate, primarily due to substantial cost overruns, we view the stock as very cheap and see both revenue and EBITDA improvements in the second half, which should set CTL up well for 2016.	Mcq	8/9/15
All	Revenue, Margins, and Profits	Impact	Mcq	8/9/15
All	Revenue, Margins, and Profits	Wholesale strategic price hikes and moving past a \$13m 1x revenue hit in Q2 should help Q3 revenue even before CAF-2 contributions.	Mcq	8/9/15
All	Revenue, Margins, and Profits	We feel the extension of bonus depreciation this year is likely and that could lead to a step up in the pace of share repurchases.	Mcq	8/9/15
All	Revenue, Margins, and Profits	Nevertheless it was disappointing to see the 7% sequential drop in EBITDA as margins dropped more than 300bp Y/Y, as management backed away from their long standing goal to achieve revenue stability in 2015 (as consensus already expected).	MS	8/6/15
All	Revenue, Margins, and Profits	To the company's credit, they clearly recognized the need to take actions to address the weak results, and provided some details that suggested that the 2Q weakness derived in part from several items that do not necessarily suggest a broader deterioration in business trends; indeed management now hopes to stabilize revenues in 2016.	MS	8/6/15
All	Revenue, Margins, and Profits	2Q15 Key Highlights	MS	8/6/15
All	Revenue, Margins, and Profits	2Q15 revenue of \$4,451 was below consensus/MSe and near the low end of management's guidance, driven primarily by pressures in wholesale revenue. Core revenue declined 2% Y/Y, while strategic revenue grew 1.9% Y/Y, the slowest pace in over two years.	MS	8/6/15
All	Revenue, Margins, and Profits	While management was disappointed with 2Q15 results, they noted that the sales force realignment is showing traction, as they exited the quarter with a strong pipeline of sales opportunities.	MS	8/6/15

EXHIBIT 12B

2015 Q2 Earnings Release Analyst Reports Major Themes

Category1	Category2	Quotations	Report	Date
All	Revenue, Margins, and Profits	Adj. EBITDA missed consensus/MSe as higher employment related expenses and lower revenues drove margins to 36.8% (vs 38.3% MSe), down 310 bps Y/Y.	MS	8/6/15
All	Revenue, Margins, and Profits	2Q15 results came in below expectations, as disruptions from the reorganization proved to be more intractable than expected. Still, management reaffirmed their commitment to the dividend and believes Centurylink has the assets to stabilize revenue/EBITDA. Establishing \$31 PT, Remain Equal weight.	MS	8/11/15
All	Revenue, Margins, and Profits	Management highlighted a ~\$40M headwind in 2H15 from a renegotiated wholesale contract.	MS	8/11/15
All	Revenue, Margins, and Profits	Costs have been driven higher by insurance and pension true ups, higher employee related expenses, higher CPE sales, and management exceeding business unit level operating budgets.	MS	8/11/15
All	Revenue, Margins, and Profits	they believe they have ample opportunity to reduce costs near term, announcing a \$125M opex reduction in 2015 through automation, simplification and increased focused on business unit budgets.	MS	8/11/15
All	Revenue, Margins, and Profits	Our new \$31 price-target is based on 5.9x EV/'16 Mse EBITDA, and a ~7% dividend yield	MS	8/11/15
All	Revenue, Margins, and Profits	The company has a strong balance sheet, and management believes revenue stability is achievable in 2015 (but high 2014 CPE sales makes the comp more difficult)	MS	8/11/15
All	Revenue, Margins, and Profits	We estimate that the growth of strategic services will offset the secular decline of legacy services, with growth coming from data hosting, fiber to the tower, broadband, and IPTV.	MS	8/11/15
All, Business	Revenue, Margins, and Profits	Adjusted EBITDA of \$1.62bn was 3.9% below our/Street forecasts and nearly 3% below the low end of guidance. Execution issues are to blame, particularly in the Business segment where margins dipped 240bps QoQ and 300bps YoY.	Jffrs	8/6/15
Business	Revenue, Margins, and Profits	Business	MS	8/6/15

EXHIBIT 12B**2015 Q2 Earnings Release Analyst Reports Major Themes**

Category1	Category2	Quotations	Report	Date
Business	Revenue, Margins, and Profits	Business revenues declined 4.6% (vs -2.8% in 1Q15 and +0.2% in 2Q14) as legacy declined 7.7% (lower voice & switched access), while strategic revenue fell 0.4% (declines in low-bandwidth data services and wholesale repricing offset by higher MPLS, ethernet, and wavelength).	MS	8/6/15
Business	Revenue, Margins, and Profits	Operating expenses increased Y/Y driven by higher employee-related costs, though CPE costs declined.	MS	8/6/15
Business	Revenue, Margins, and Profits	Hosting revenue (-3% Y/Y) was partially impacted by FX, higher customer credits, and lower nonrecurring revenue.	MS	8/6/15
Consumer	Revenue, Margins, and Profits	Consumer Strategic The Lone Bright Spot.	Jffrs	8/6/15
Consumer	Revenue, Margins, and Profits	Total and Core revenue were 0.2% below expectations. Among the segments, Consumer revenue beat by 0.6% as Strategic growth accelerated to 6.9%, the highest level in a year. Business revenue missed by \$26mn, with half attributed to a renewed wholesale agreement, while Hosting and Legacy were also weaker.	Jffrs	8/6/15
Consumer	Revenue, Margins, and Profits	Consumer	MS	8/6/15
Consumer	Revenue, Margins, and Profits	Consumer revenues increased 0.1% (interrupting three consecutive quarters of negative growth). Strategic revenue was +6.9%, while legacy revenue declined 5.8%. Strategic revenue growth was driven by growth in HSI and Prism TV customers, combined with price increases, while legacy declines were due to lower local and long-distance revenue.	MS	8/6/15
Consumer	Revenue, Margins, and Profits	Operating costs increased due to content costs from Prism TV, which drove consumer segment income margin to 58.9% (down 100 bps Y/Y and 180 bps sequentially). HIS adds came in at -9k, and CenturyLink suggests that adds would remain negative in 2H15.	MS	8/6/15

Notes:

[1] Analyst reports were selected from the top four or five brokers and investment banks who most consistently issued reports on CenturyLink. The reports immediately following each earnings release were selected

EXHIBIT 12B

2015 Q2 Earnings Release Analyst Reports Major Themes

Category1	Category2	Quotations	Report	Date
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[2] Bolded Text indicates that the entry was the heading of a section within the analyst report.

EXHIBIT 13A
EARNINGS RELEASE DATA - 2015, Q4

PR							
Section	Segment	Metric	Period	Value	Units	Trend	Quote
H/B	All	Op. Rev.	Q	4.48	\$B	up	Achieved operating revenues of approximately \$4.5 billion, including core
H		Core Rev.		4.0			revenues of approximately \$4.0 billion in fourth quarter; full-year 2015
H/B		Op. Rev.	A	17.9		down	operating revenues of \$17.9 billion, a 0.7% decline from full-year 2014
H/B	All	Op. Cash Flow	Q	1.8	\$B	up	Generated operating cash flow of \$1.8 billion, excluding special items, in
			A	7		down	fourth quarter; full-year 2015 operating cash flow, excluding special items, of \$7.0 billion
H	All	Free Cash Flow	Q	591	\$M		Generated free cash flow, excluding special items, of \$591 million in fourth
			A	2.7	\$B		quarter and \$2.7 billion in full-year 2015
H/B	All	Adj. Net Income	Q	434	\$M	up	Achieved Adjusted Net Income of \$434 million and Adjusted Diluted EPS
		Adj. Diluted EPS		0.8	\$	up	of \$0.80 in fourth quarter, excluding special items
H	All	Prism TV Customers	Q	285,000	subscribers	up	Added more than 16,000 Prism™ TV customers during fourth quarter 2015, ending the period with approximately 285,000 customers.
H	All	Value of Shares Repurchased	Q	1	\$B		Completed \$1 billion repurchase program in fourth quarter; repurchased approximately 32 million shares under the program since May 2014
		Shares Repurchased		32	million shares		
B	All	Op. Expenses	Q	3.71	\$B	down	Operating expenses, excluding special items, decreased to \$3.71 billion from \$3.86 billion in fourth quarter 2014. The year-over-year decrease was primarily driven by lower depreciation and amortization expenses and employee-related expenses
B	All	Operating Cash Flow Margin	Q	40.6	percent	up	For fourth quarter 2015, CenturyLink achieved an operating cash flow margin, excluding special items, of 40.6% versus 38.5% in fourth quarter 2014.
B	All	Core Rev.	A	16.1	\$B	down	Core revenues decreased to \$16.1 billion in 2015 from \$16.3 in 2014.
B	All	Adj. Net Income	A	1.5	\$B	flat	Adjusted Net Income, excluding special items, was \$1.5 billion in 2015, flat compared to 2014.

EXHIBIT 13A
EARNINGS RELEASE DATA - 2015, Q4

PR Section	Segment	Metric	Period	Value	Units	Trend	Quote
B	All	Adj. Diluted EPS	A	2.71	\$	up	Adjusted Diluted EPS, excluding special items, was \$2.71 in 2015 compared to \$2.61 in 2014.
B	All	Net Income (GAAP)	Q	338	\$M	up	Under generally accepted accounting principles (GAAP), net income for fourth quarter 2015 was \$338 million compared to a net income of \$188 million for fourth quarter 2014, and diluted earnings per share was \$0.62 for fourth quarter 2015 compared to \$0.33 for fourth quarter 2014.
		Diluted EPS (GAAP)		0.62	\$	up	
B	All	Net Income (GAAP)	A	878	\$M	up	Net income under GAAP for full-year 2015 was \$878 million compared to net income of \$772 million for full-year 2014, and diluted earnings per share for full-year 2015 was \$1.58 compared to diluted earnings per share of \$1.36 for full-year 2014.
		Diluted EPS (GAAP)		1.58	\$	up	
B	All	Segment Income Margin	A	50.1	percent	up	Segment income margin improved to 50.1% from 49.1% a year ago primarily due to cost reduction efforts and strategic revenue growth, which together more than offset the margin impact of the continued decline in legacy revenue.
B	Business	High-Bandwidth Data Services Rev. Growth	Q	9	percent		High-bandwidth data services revenues from business customers grew approximately 9% year-over-year.
B	Business	Strategic Rev.	Q	1.6	\$B	up	Strategic revenues were \$1.60 billion in the quarter, a 1.4% increase from fourth quarter 2014, primarily due to increased high-bandwidth data services and IT services revenues which were partially offset by continued declines in low-bandwidth data services.
B	Business	Total Segment Rev.	Q	2.66	\$B	down	Total segment revenues were \$2.66 billion, a decrease of 1.6% from fourth quarter 2014, due primarily to declines in low-bandwidth data services and legacy revenues which were partially offset by growth in high-bandwidth data services revenues.
B	Consumer	Total Segment Rev.	Q	1.51	\$B	up	Total segment revenues were \$1.51 billion for fourth quarter 2015, an increase of 1.3% from fourth quarter 2014.
B	Consumer	Strategic Rev.	Q	773	\$M	up	Strategic revenues were \$773 million in the quarter, a 6.3% increase over fourth quarter 2014.

EXHIBIT 13A
EARNINGS RELEASE DATA - 2015, Q4

PR	Section	Segment	Metric	Period	Value	Units	Trend	Quote
	B	Consumer	Addressable Homes	Q	3.2	million units	up	Approximately 16,000 CenturyLink® Prism™ TV customers were added during fourth quarter 2015 and more than 190,000 addressable homes were added in new and existing service areas, ending the quarter with nearly 3.2 million addressable homes.
	G	All	Op. Rev.	A	17.55 - 17.8	\$B		
	G	All	Core Rev.	A	15.75 - 16.0	\$B		
	G	All	Op. Cash Flow	A	6.6 - 6.8	\$B		
	G	All	Adj. Diluted EPS	A	2.5 - 2.7	\$		
	G	All	Free Cash Flow	A	1.8 - 2.0	\$B		
	G	All	Op. Rev.	Q	4.4 - 4.45	\$B		
	G	All	Core Rev.	Q	3.95 - 4.0	\$B		
	G	All	Op. Cash Flow	Q	1.66 - 1.72	\$B		
	G	All	Adj. Diluted EPS	Q	0.67 - 0.73	\$		
Number of Reported Values:					37	Trend:	16 Up 5 Down	

EXHIBIT 13B**2015 Q4 Earnings Release Analyst Reports Major Themes*****Major Themes***

- Total revenue and EBITDA beat guidance. Morgan Stanley's report noted that the revenue beat was driven by strategic business revenue and legacy consumer revenue. (4/4)
- Management's guidance in line with analysts' estimates. (4/4)
- Data center sale expected. No consistent forecasting of what the impact of this will be. Jeffries said they are "...cautious on the potential valuation...". (4/4)
- Stock buybacks possible, waiting on sale of data center. (4/4)

Category 1	Category2	Quotations	Report	Date
All	Data Center Sale	CTL expects to begin negotiations for its data center sale in the coming few weeks and hinted that there is already a significant amount of interest in the asset.	BoA	2/11/16
All	Data Center Sale	Data Center Sale Proceeding.	Jffrs	2/11/16
All	Data Center Sale	More formal engagement is expected in the coming weeks. We continue to believe management's preference is to sell, though we are cautious on the potential valuation given the likely investment needed, particularly in legacy facilities.	Jffrs	2/11/16
All	Data Center Sale	Data center sale update still pending; buyback waits on that, Embarq debt refinancing.	JPM	2/11/16
All	Data Center Sale	Management announced during the 3Q15 earnings call that CTL had hired advisors to review strategic options regarding the company's Data Center business.	JPM	2/11/16
All	Data Center Sale	Depending on the outcome of the datacenter sale and refinancing of the Embarq debt, CTL left the door open for future returns of capital later in the year.	JPM	2/11/16
All	Guidance and Forecasts	A steady print in an unsteady market	BoA	2/11/16
All	Guidance and Forecasts	CenturyLink reported a solid quarter and provided guidance that was in-line with prequarter Street expectations.	BoA	2/11/16

EXHIBIT 13B

2015 Q4 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Guidance and Forecasts	The company provided a range of low-to-mid 60% for '16 and low-to-mid 70% for '17 (on higher cash taxes) and CTL is comfortable assuming a mid-70% dividend payout range for the intermediate term, at least.	BoA	2/11/16
All	Guidance and Forecasts	Guidance In Line with Modest Implied Timing Differences.	Jffrs	2/11/16
All	Guidance and Forecasts	Given anticipated sequential revenue declines, the non-recurring expense benefit, as well as elevated marketing (\$20mn) and payroll taxes (\$25mn), 1Q EBITDA was nearly 4.7% below our forecast. Despite the strong 4Q performance, we do not anticipate Street estimates to move significantly given the guidance.	Jffrs	2/11/16
All	Guidance and Forecasts	2016 revenue and EBITDA guidance are in-line with our previous estimate.	JPM	2/11/16
All	Guidance and Forecasts	Management guided 2016 revenue to be down ~1% y/y at \$17.55-17.8b... EBITDA guidance of \$6.6-6.8b.	JPM	2/11/16
All	Guidance and Forecasts	Management expects 2Q16 broadband adds to remain seasonally negative, but sounded positive on overall HSI adds for 2016.	JPM	2/11/16
All	Guidance and Forecasts	The company also guided to pro forma adjusted diluted EPS to be in the range of \$2.50-\$2.70 and we estimate \$2.65. Capex guidance for the year is \$3.0b and we model the same. Finally, our FCF estimate comes to \$1.904b, within guidance of \$1.8-2.0b, with a 2016 payout ratio of ~61%. 2017 payout ratio is expected in the low 70's percent range on higher cash taxes.	JPM	2/11/16
All	Guidance and Forecasts	CenturyLink reported results above the high end of company guidance. Results likely calm concerns over further re-org disruptions (& the more bearish scenario of a near term dividend cut). 2016 guidance was broadly in-line (EPS higher), and data center divestiture commentary was constructive.	MS	2/11/16
All	Guidance and Forecasts	Other	MS	2/11/16
All	Guidance and Forecasts	2016 guidance was broadly in-line with our estimates; however, FCF was \$70m higher, driven by cash taxes (midpoint of \$500m vs MSe \$630m).	MS	2/11/16
All	Guidance and Forecasts	Investment Thesis	MS	2/11/16

EXHIBIT 13B**2015 Q4 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
All	Guidance and Forecasts	CenturyLink's 8.8% dividend yield is supported by ~62% payout from free cash flow (2016E), and 4 years of additional bonus depreciation (beyond retroactive for 2015), though we estimate the payout ratio reaches 70% by 2018. Still, we think CenturyLink's yield will remain attractive in our low interest rate environment.	MS	2/11/16
All	Guidance and Forecasts	The company has a strong balance sheet, and management believes sequential revenue stability is achievable in 2H16, with EBITDA stability 12 to 18 months later.	MS	2/11/16
All	Guidance and Forecasts	We estimate that the growth of strategic services will offset the secular decline of legacy services, with growth coming from highbandwidth data services (+8%), hosting (+1%) and strategic consumer (+6%).	MS	2/11/16
All	Guidance and Forecasts	Our \$25 year-end 2016 price target is based on a 5-year DCF analysis which assumes a 5.1x terminal EV/EBITDA multiple and 6.6% WACC. Key risks are cable competition, lower capex, and Business revenue acceleration.		
All	Other	CTL joins VZ and T as haven stocks	BoA	2/11/16
All	Other	In our opinion, even though CTL is partly a HY issuer (with a heavy investment-grade component), its lack of exposure to the aforementioned areas [oil & gas], its ~7.8% current dividend yield (vs. T at ~5.3% and VZ at ~4.6%), and its spread to treasuries near its widest in 3 years (+6.3% vs. US 10Y), should put CTL on the radar screen of investors who are looking for attractive returns in a turbulent market.	BoA	2/11/16
All	Other	Valuation/Risks	Jffrs	2/11/16
All	Other	Strong 4Q15 Numbers and Reassuring 2016 Guide, No Update on Data Center Sale	JPM	2/11/16
All	Other	Buybacks ticked up from last quarter's \$263m to \$280m for 4Q15, or ~10.4m shares for 4Q; no buybacks are expected in 2016. Management hopes to make progress with the data center sales over the coming weeks...	JPM	2/11/16
All	Other	Potential Catalysts	MS	2/11/16
All	Other	Disciplined and accretive M&A Data Center Sale New share buyback program Continued revenue improvement, line loss trends, and broadband adds CAF II Stimulus (revenue from subscribers) REIT transaction (longer term)	MS	2/11/16

EXHIBIT 13B**2015 Q4 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
All	Other	Potential Risks	MS	2/11/16
All	Other	Cable competition (90%+ overlap) Macro pressure on enterprise revenue Cloud price cuts from Amazon, Google, and Microsoft Margin pressure from revenue mix shift Increased Regulatory Pressure Pension/OPEB obligations	MS	2/11/16
All	Other	We do not expect CTL to announce a REIT transaction in the near term, but plans could change depending on how CS&L trades.	MS	2/11/16
All	Revenue, Margins, and Profits	4Q revenue, EBITDA ahead, '16 guidance in-line	BoA	2/11/16
All	Revenue, Margins, and Profits	CTL reported total revenue of \$4.48b that was above our estimate of \$4.42b and consensus of \$4.42b and above the top end of guidance of \$4.40-4.45b. Adjusted EBITDA of \$1.82b compares to our \$1.74b and consensus of \$1.73b and also above the high end of the guidance range of \$1.72-1.77b.	BoA	2/11/16
All	Revenue, Margins, and Profits	appropriate compared to RLEC peers given its better collection of assets, proximity to revenue and EBITDA stability, and potential stock buybacks if the company is able to successfully sell its data center unit.	BoA	2/11/16
All	Revenue, Margins, and Profits	Key Takeaway	Jffrs	2/11/16
All	Revenue, Margins, and Profits	After struggling earlier in the year, CTL finished with a strong 4Q, exceeding guidance on all key financial metrics... Additionally, buybacks are on hold pending potential action on data center assets	Jffrs	2/11/16
All	Revenue, Margins, and Profits	A 4Q Beat.	Jffrs	2/11/16

EXHIBIT 13B

2015 Q4 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Revenue, Margins, and Profits	Total revenue of \$4.03bn... driven by outperformance in both Strategic and Legacy services. Notably, Legacy declines improved to 5%, the lowest rate in years, while Strategic accelerated to 3%, in part due to an easier comp.	Jffrs	2/11/16
All	Revenue, Margins, and Profits	Strong EBITDA, Even Without 1x Benefits.	Jffrs	2/11/16
All	Revenue, Margins, and Profits	For the second straight quarter, CTL reported stronger-than-expected adjusted EBITDA... excluding the benefit, CTL failed to meet targeted expense reductions in the quarter.	Jffrs	2/11/16
All	Revenue, Margins, and Profits	EBITDA beat guidance and consensus as SG&A came in below expectations, and Opex was down nicely both q/q and y/y.1Q16 guidance implies lower margins q/q but is in-line with our previous EBITDA estimate.	JPM	2/11/16
All	Revenue, Margins, and Profits	given the secular decline in voice access lines, the company's revenue stream continues to move from high-margin legacy voice products to lower-margin strategic products, and we expect margin to be under meaningful pressure. With a large cash tax burden expected in 2016 as its NOLs run out, its payout ratio is expected to be the highest amongst its RLEC peers.	JPM	2/11/16
All	Subscribers	CenturyLink beat 4Q estimates and the high-end of guidance, with higher than estimated broadband losses but more-than-expected PrismTV gains.	JPM	2/11/16
All	Subscribers	Voice and broadband trends weaker than estimates, while PrismTV adds accelerated q/q.	JPM	2/11/16
All	Subscribers	Access line losses in 4Q15 were worse at a 5.2% decline y/y, an acceleration q/q and y/y. Broadband lost more than expected as well at -23k vs. our 0k, but it sounds like management expects churn to improve and positive subs in 2016.	JPM	2/11/16
Business	Revenue, Margins, and Profits	Business was the primary driver of the performance relative to our expectations, with better results in High-bandwidth and Other Strategic Services while Hosting continued to disappoint.	Jffrs	2/11/16
Business	Revenue, Margins, and Profits	Business	MS	2/11/16

EXHIBIT 13B

2015 Q4 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
Business	Revenue, Margins, and Profits	Business revenues (\$2,655m) declined 1.6%, but beat Mse (\$2,616m). Strategic revenue growth (+1.4%) was better than MSe, driven by high-bandwidth services (+8.6%) and other business services (IT services), which more than doubled from \$21m to \$49m.	MS	2/11/16
Business	Revenue, Margins, and Profits	The company noted that they continue to see strong demand for the high-bandwidth data and managed services, and they expect the rate of decline in legacy to improve.	MS	2/11/16
Business, Consumer	Revenue, Margins, and Profits	4Q15 Key Highlights:	MS	2/11/16
Business, Consumer	Revenue, Margins, and Profits	4Q15 revenue (\$4,476m), Adj. EBITDA (\$1,804m)... The revenue beat relative to MSe was driven by better strategic business revenue (+\$40m) and legacy consumer revenue (+\$15m). Costs were also better, declining over \$100m sequentially (including \$35m in one time true-ups).	MS	2/11/16
Consumer	Revenue, Margins, and Profits	Consumer revenue weaker as solid business revenue lifted the beat; EBITDA margin higher than anticipated due to cost discipline.	JPM	2/11/16
Consumer	Revenue, Margins, and Profits	4Q15 revenue of \$4.476b was above our \$4.447b as mild underperformance in the consumer segment was more than offset by stronger business performance.	JPM	2/11/16
Consumer	Revenue, Margins, and Profits	We expect revenue trends to continue to move in the right direction this year, albeit at a slower rate, and look for a higher level of expenses in 2016 caused by higher SG&A.	JPM	2/11/16
Consumer	Revenue, Margins, and Profits	Consumer	MS	2/11/16
Consumer	Revenue, Margins, and Profits	Consumer revenue increased 1.3% Y/Y, with strategic revenue growth of +6.3% (MSe +6.2%) and legacy growth of -3.4% (MSe -5.3%) as price increases helped offset lost revenue from declining access lines.	MS	2/11/16
Consumer	Revenue, Margins, and Profits	Broadband now represents 44% of consumer revenue, while voice is 43%. Broadband net-adds (-23k) fell below our estimate (-10k) as involuntary churn continued to pressure results.	MS	2/11/16

EXHIBIT 13B**2015 Q4 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
Consumer	Subscribers	Management indicated that they are in a position to achieve positive broadband net-adds in 2016 (though too early to feel completely confident).	MS	2/11/16

Notes:

[1] Analyst reports were selected from the top four or five brokers and investment banks who most consistently issued reports on CenturyLink. The reports immediately following each earnings release were selected

[2] Bolded Text indicates that the entry was the heading of a section within the analyst report.

EXHIBIT 14A
EARNINGS RELEASE DATA - 2016, Q2

PR Section	Segment	Metric	Period	Value	Units	Trend	Quote
H/B	All	Op. Rev.	Q	4.4	\$B	down	Achieved operating revenues of approximately \$4.4 billion, including core
H		Core Rev.		4.0			revenues of approximately \$4.0 billion
H/B	All	Op. Income	Q	650	\$M	up	Generated operating income of \$650 million; operating cash flow of \$1.65
		Op. Cash Flow		1.65	\$B	up	billion, excluding special items
H	All	Free Cash Flow	Q	617	\$M		Generated free cash flow of \$617 million, excluding special items
H/B	All	Net Income	Q	196	\$M	up	Achieved net income of \$196 million and diluted EPS of \$0.36; adjusted
		Diluted EPS		0.36	\$	up	net income of \$342 million and adjusted diluted EPS of \$0.63, excluding
		Adj. Net		342	\$M	up	special items
		Income					
		Adj. Diluted		0.63		up	
		EPS					
H/B	All	40 Mbps+	Q	8.4	million	up	Increased 40 Mbps and higher addressable units by 700,000 year-over-year,
		Addressable			units		of which 500,000 were GPON-enabled; ended second quarter 2016 with 1.2
		Units					million GPON-enabled addressable units
		GPON-Enabled		1.2		up	
		Addressable					
		Units					
G	All	40 Mbps+		11	million		“[...] We expect to reach 11 million 40 Mbps or higher, including 2 million
		Addressable			units		GPON-enabled addressable households and businesses by year-end 2017,”
		Units					concluded Post.
		GPON-Enabled		2			
		Addressable					
		Units					

EXHIBIT 14A
EARNINGS RELEASE DATA - 2016, Q2

PR							
Section	Segment	Metric	Period	Value	Units	Trend	Quote
B	All	Op. Expenses Op. Expenses (Excluding Special Items)	Q	3.75 3.73	\$B	down down	Operating expenses decreased to \$3.75 billion from \$3.87 billion in second quarter 2015. Excluding special items, operating expenses decreased to \$3.73 billion from \$3.84 billion in second quarter 2015.
B	All	Cash Flow Margin	Q	37.5	percent	up	For second quarter 2016, CenturyLink achieved an operating cash flow margin, excluding special items, of 37.5% versus 36.8% in second quarter 2015.
B	Business	Rev. High- Bandwidth Data Rev. Growth	Q	2.6 8	\$B percent	down	Business segment revenues were \$2.60 billion, a decrease of 2.3% from second quarter 2015, primarily due to a decline in legacy revenues, which was partially offset by 8% growth in high-bandwidth data revenues.
B	Business	Strategic Rev.	Q	1.23	\$B	up	Strategic revenues were \$1.23 billion in the quarter, an increase of 5.0% from second quarter 2015, primarily due to the increased high-bandwidth data revenues being partially offset by lower hosting revenues.
B	Consumer	Rev.	Q	1.49	\$B	down	Consumer segment revenues were \$1.49 billion, a decrease of 0.6% from second quarter 2015, primarily due to a decline in legacy voice revenues, which was partially offset by growth in broadband and Prism® TV revenues.
B	Consumer	Strategic Rev.	Q	800	\$M	up	Strategic revenues were \$800 million in the quarter, a 5.5% increase over second quarter 2015.
G		Op. Rev.	Q	4.35 - 4.4	\$B		
G		Core Rev.	Q	3.9 - 3.95	\$B		
G		Op. Cash Flow	Q	1.56 - 1.61	\$B		

EXHIBIT 14A
EARNINGS RELEASE DATA - 2016, Q2

PR	Segment	Metric	Period	Value	Units	Trend	Quote
G		Adj. Diluted EPS	Q	0.52 - 0.57	\$		

Number of Reported Values:	25	Trend:	11 Up
			5 Down

EXHIBIT 14B**2016 Q2 Earnings Release Analyst Reports Major Themes*****Major Themes***

- Analysts believed that the pending data center sale could have a positive impact, but some worry the price may be too high to find a buyer. (5/5)
- Lower CapEx led to higher cash flows, but some analysts pointed to the need to maintain CapEx in order to remain competitive against cable companies. (4/5)
- Many analysts made note of CTL's plan to push higher margin and different video bundles, but some were skeptical of the plan's profitability. (3/5)
- CTL's plans to offer an over-the-top video service was met with some skepticism. (3/5)

Category 1	Category2	Quotations	Report	Date
All	Data Center Sale	Data center proceeds could offset future cash tax bump	BoA	8/4/16
All	Data Center Sale	CenturyLink noted that the process to sell its data centers is going well and it has narrowed down the group of finalists.	BoA	8/4/16
All	Data Center Sale	Still, based on our conversations we believe ~40% of proceeds will go to de-levering (to neutralize leverage impact), 20% to stock repurchase (to neutralize FCF/share), and the balance to creating a rainy day fund for addressing cash tax payments in... some of the perceived risk to the dividend	BoA	8/4/16
All	Data Center Sale	Data centers sale opportunity coming in next 3 months	BoA	8/3/16
All	Data Center Sale	No decision has been made on the use of proceeds however. Still, based on our conversations we believe ~40% of proceeds will go to delevering (to neutralize leverage impact), 20% to stock repurchase (to neutralize FCF/share), and the balance to creating a rainy day fund for addressing cash tax payments in excess of run rate taxes as bonus tax depreciation benefits reverse in '17-'20.	BoA	8/3/16

EXHIBIT 14B**2016 Q2 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
All	Data Center Sale	Data Center Sale Uncertain.	Jffrs	8/4/16
All	Data Center Sale	we are skeptical that a buyer will emerge at a price CenturyLink is likely asking. The absence of a high-multiple sale, coupled with continued EBITDA erosion further concerns us with respect to longer-term dividend sustainability.	Jffrs	8/4/16
All	Data Center Sale	Data center sale update still pending; buyback waits on that, Embarq debt refinancing.	JPM	8/4/16
All	Data Center Sale	On the earnings call management stated that has had productive and on-going conversations with potential buyers and hopes to finalize a deal by late 3Q or early 4Q, though it continues to leave the possibility open that there could be no sale.	JPM	8/4/16
All	Data Center Sale	We estimate that the assets to be sold have a run-rate of ~\$600m in revenue and ~30% EBITDA margins, which in the low-double digits of EBITDA could generate as much as \$2 billion.	JPM	8/4/16
All	Data Center Sale	#1 Data center monetization is coming in late 3Q/4Q	Mcq	8/4/16
All	Data Center Sale	An outright sale is the preferred outcome and interest levels remain high...The colocation business remains attractive, making up 50%+ of total hosting revenues in 2Q. Proceeds from a sale could be used for buybacks, delevering, and investments.	Mcq	8/4/16
All	Data Center Sale	Data Center Sale	MS	8/4/16

EXHIBIT 14B**2016 Q2 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
All	Data Center Sale	has not decided on use of proceeds, but is considering a number of alternatives, including reinvestment, debt pay down, and repurchasing stock. LQA hosting revenue was \$624m.	MS	8/4/16
All	Data Center Sale	Data Center Sale	MS	8/4/16
All	Guidance and Forecasts	3Q/4Q EBITDA shifting around, but full year estimate unch	BoA	8/4/16
All	Guidance and Forecasts	CenturyLink provided 3Q EBITDA guidance of \$1.56b to \$1.61b which was light relative to our previous expectations as the company believes it will see +\$30m of seasonal Q/Q costs.	BoA	8/4/16
All	Guidance and Forecasts	The math of the 3Q midpoint guide plus 1Q and 2Q actuals implies CTL must generate \$1.675bn in 4Q EBITDA up from the \$1.585bn midpoint in 3Q.	BoA	8/4/16
All	Guidance and Forecasts	Our 3Q EBITDA estimate stands at \$1.584b and 4Q of \$1.67 for a full year estimate of \$6.6b, unchanged from our previous estimate	BoA	8/4/16
All	Guidance and Forecasts	Price objective basis & risk	BoA	8/4/16
All	Guidance and Forecasts	Our price objective of \$42 is based on a 6.1x 2016E EV/EBITDA multiple, in line with the RLEC avg. and conservative, in our view, given the proximity of positive revenue inflection and a superior collection of RLEC assets.	BoA	8/4/16
All	Guidance and Forecasts	After 2Q beat, 3Q guide looks light but 4Q gets natural lift	BoA	8/3/16
All	Guidance and Forecasts	CenturyLink gave 3Q16 guidance covering operating revenues, core revenues, operating cash flow and adj. diluted EPS. CTL expects operating revenue of \$4.35-4.40b	BoA	8/3/16

EXHIBIT 14B

2016 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Guidance and Forecasts	EBITDA guidance of \$1.56b to \$1.61b was light vs. our \$1.64b as the company believes it will see +\$30m of seasonal Q/Q costs...	BoA	8/3/16
All	Guidance and Forecasts	The math of the midpoint guide plus 1Q and 2Q implies CTL must generate \$1.675bn in 4Q EBITDA up from \$1.585bn midpoint in 3Q. This looks aggressive but assuming another \$25m of Q/Q revenue pressure in 4Q, it implies CTL must cut 4Q vs. 3Q costs by just \$115m vs. last year's \$178m.	BoA	8/3/16
All	Guidance and Forecasts	Price objective basis & risk	BoA	8/3/16
All	Guidance and Forecasts	Management reiterated 2016 guidance and hopes to finalize the data center sale by early 4Q. We appreciate the better tone and are intrigued by CTL's pending OTT product rollout, but remain cautious on the shares.	JPM	8/4/16
All	Guidance and Forecasts	3Q guidance lowered slightly; expect higher CAPEX and much higher cash taxes in 2H16.	JPM	8/4/16
All	Guidance and Forecasts	Management reiterated 2016 guidance but slightly lowered its 3Q16 revenue, EBITDA, and EPS outlook...Capex guidance for the year is \$3.0b and we model \$2.98b, which combined with cash taxes of \$400-500m equates to FCF of \$1.858b...	JPM	8/4/16
All	Guidance and Forecasts	(Neutral; Price Target: \$29.00)	JPM	8/4/16
All	Guidance and Forecasts	We are modeling 3Q revenue/adj. EBITDA of US\$4.37bn/US\$1.56bn in line with management's guidance of US\$4.35-4.4bn and US\$1.56-1.61bn, respectively.	Mcq	8/4/16
All	Guidance and Forecasts	Guidance	MS	8/4/16
All	Guidance and Forecasts	Management guided 3Q16 EPS, Revenue, and Adj. EBITDA below Mse /consensus... We believe 3Q16 guidance is conservative, even after factoring in higher seasonal costs in 3Q, and our lowered estimates reflect the high end of guidance.	MS	8/4/16
All	Guidance and Forecasts	CenturyLink's 7.1% dividend yield is supported by ~58% payout from free cash flow (2016E)...	MS	8/4/16
All	Other	The company has ambitious network augmentation plans which it believes can be attained within the current capex range after which, in the '20 range and after it believes capex can drift as much as \$500m (17%) lower on a run rate basis.	BoA	8/3/16
All	Other	Pressures Unlikely To Abate	Jffrs	8/4/16

EXHIBIT 14B**2016 Q2 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
All	Other	Strategic Gains Mean Margin Pain.	Jffrs	8/4/16
All	Other	While we applaud the proper classification of low-band business data as "legacy", the key issue of margin transition remains.	Jffrs	8/4/16
All	Other	Valuation/Risks	Jffrs	8/4/16
All	Other	Management noted that CTL has been testing an OTT video product in one market, and intends to expand the roll out.	JPM	8/4/16
All	Other	Management noted that they are currently testing an over-the-top video offer, including content tiers and a skinny bundle... In addition to 3.6m homes today where the company has Prism video available it also offers a bundle with DTV for as little as \$30/month, and plans to push video bundles harder going forward.	JPM	8/4/16
All	Other	We believe the trend of RLECs rolling out new OTT video products should be a minor benefit to churn and top-line revenue, but are skeptical that these companies that have little scale in buying content will be around long once offers like Hulu Live and DTV Now hit the market in the next year.	JPM	8/4/16
All	Other	Event	Mcq	8/4/16
All	Other	The digital economy is a tough one... Soft subs and guidance, though, take down our 3Q estimates. Our US\$31 target, which excludes the review of its data centers, remains unchanged...	Mcq	8/4/16
All	Other	#4 Efficiencies and controlled capex should help FCF	Mcq	8/4/16
All	Other	We expect 3Q opex from plant maintenance/utility to be high; consumer video initiatives and increased marketing efforts could also add margin pressure.	Mcq	8/4/16
All	Other	2Q16 Review: Strong Financials, Light Subs & 3Q Guide	MS	8/4/16
All	Other	CenturyLink reported EBITDA/EPS above the high end of guidance, while revenue was in-line. Broadband net-adds were notably weak, hit by both high churn and lower gross adds. 3Q16 guidance was below MSe/consensus, though we believe guidance is conservative.	MS	8/4/16
All	Other	FCF was materially above MSe, driven by lower capex (though capex is supposed to normalize/increase in 2H16 vs 1H16), and cash tax deferred from 1H16 to 2H16.	MS	8/4/16
All	Other	What's Changed	MS	8/4/16

EXHIBIT 14B**2016 Q2 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
All	Other	Our 2016 EBITDA increases \$17m (though 2H16 falls \$14m). 2016 revenue falls slightly, reflecting high legacy revenue loss, and a slow broadband recovery. Our broadband net add estimates decline 106k/32k for 2016/2017.	MS	8/4/16
All	Other	The company has a solid balance sheet, and we expect leverage to remain around 3x. We think capex may need to move higher (or at least not decline) if CenturyLink is going to be compete effectively with cable + other emerging competitors.	MS	8/4/16
All	Other	Disciplined and accretive M&A	MS	8/4/16
All	Other	New share buyback program	MS	8/4/16
All	Other	Revenue improvement, line loss trends, and broadband adds	MS	8/4/16
All	Other	REIT transaction (longer term)	MS	8/4/16
All	Other	Cable competition (90%+ overlap)	MS	8/4/16
All	Other	Cloud price cuts from Amazon, Google, and Microsoft	MS	8/4/16
All	Other	Increased Regulatory Pressure	MS	8/4/16
All	Other	Pension/OPEB obligations	MS	8/4/16
All	Revenue, Margins, and Profits	In 4Q15, CTL lowered its expenses by \$178m (\$115m non-GAAP Adj. expenses) and the company believes it has \$60-80m in naturally lower seasonal expenses in 4Q vs. 3Q in addition to planned cost initiatives.	BoA	8/4/16
All	Revenue, Margins, and Profits	2Q EBITDA ahead	BoA	8/4/16
All	Revenue, Margins, and Profits	CTL reported total revenue of \$4.4b that was in-line with our estimate of \$4.40b and consensus of \$4.39b and within the guidance range of \$4.38-4.43b. Adjusted EBITDA of \$1.65b was ahead of our \$1.60b and consensus of \$1.62b and above the guidance range of \$1.59-1.64b on margins of 37.5% vs. our 36.3%.	BoA	8/4/16
All	Revenue, Margins, and Profits	2Q EBITDA ahead of Street and guidance	BoA	8/3/16
All	Revenue, Margins, and Profits	CTL reported total revenue of \$4.4b that was in-line with our estimate of \$4.40b and consensus of \$4.39b and within the guidance range of \$4.38-4.43b.	BoA	8/3/16

EXHIBIT 14B

2016 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Revenue, Margins, and Profits	Adjusted EBITDA of \$1.65b was ahead of our \$1.60b and consensus of \$1.62b and above the guidance range of \$1.59-1.64b on margins of 37.5% vs. our 36.3%.	BoA	8/3/16
All	Revenue, Margins, and Profits	Decent 2Q16 with Stronger Revenue and EBITDA, but Lowered 3Q Guidance, Still Waiting on Data Center Clarity:	JPM	8/4/16
All	Revenue, Margins, and Profits	EBITDA was on the high-end of guidance and consensus as revenue came in at the high end of the range while SG&A came down q/q and y/y.	JPM	8/4/16
All	Revenue, Margins, and Profits	given the secular decline in voice access lines, the company's revenue stream continues to move from high-margin legacy voice products to lower-margin strategic products, and we expect margin to be under meaningful pressure. With a large cash tax burden expected in 2016 as its NOLs run out, its payout ratio is expected to be the highest amongst its RLEC peers.	JPM	8/4/16
All	Revenue, Margins, and Profits	#3 Virtualization through NFV and SDN is a must to offset legacy decline	Mcq	8/4/16
All	Revenue, Margins, and Profits	We expect virtualization through NFV/SDN to reverse negative trends and drive efficiencies.	Mcq	8/4/16
All	Revenue, Margins, and Profits	We are modeling strategic and legacy 3Q/'16 revenues at ~US\$2.3bn/~US\$9.5bn and ~US\$1.5bn/~US\$6.3bn, for total core revenues in line with guidance.	Mcq	8/4/16
All	Revenue, Margins, and Profits	2Q16 Financial Highlights	MS	8/4/16
All	Revenue, Margins, and Profits	2Q16 revenue (\$4,398m) was in-line with guidance/consensus, while Adj. EBITDA (\$1,651m) and EPS (\$0.63) were both above the high end of guidance.	MS	8/4/16
All	Revenue, Margins, and Profits	CAF II Stimulus (revenue from subscribers)	MS	8/4/16

EXHIBIT 14B

2016 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Revenue, Margins, and Profits	Macro pressure on enterprise revenue	MS	8/4/16
All	Revenue, Margins, and Profits	Margin pressure from revenue mix shift	MS	8/4/16
All	Subscribers	significant portion of the broadband net add decline was driven by higher than expected churn from non-paying customers, coupled with a shift in focus on multi-product customers and a focus on care vs. gross additions to lower churn	BoA	8/4/16
All	Subscribers	High value customer pivot leads to lighter metrics	BoA	8/3/16
All	Subscribers	CenturyLink reported -66k DSL net adds, vs. our -12k net add estimate and compares to 2Q15 of -9k. A significant portion of the decline was driven by higher than expected churn from non-paying customers, coupled with a shift in focus on multi-product customers and a focus on care vs. gross additions to lower churn	BoA	8/3/16
All	Subscribers	Broadband Needs Are Clear, Marketing Message May Prove Challenging.	Jffrs	8/4/16
All	Subscribers	In our view, CenturyLink is making the mistake that some peers have made in believing that broadband users will buy a lower speed product than competitive offerings because they don't need that much speed.	Jffrs	8/4/16
All	Subscribers	Voice and broadband trends lower. Prism TV continues to expand.	JPM	8/4/16
All	Subscribers	Access line losses of 335k in 2Q16 were much higher than expected...with ending access lines at 11.11m vs our 11.46m... Broadband losses were also higher at -58k vs. our -5k and consensus of -2k. PrismTV added 9k subs in the quarter vs. our 8k. We now model a 7.1% y/y decline in access lines, 77k broadband net losses, and 41k PrismTV net adds for 2016.	JPM	8/4/16
All	Taxes	We model '16/'17 FCF of US\$1.95bn/US\$2.3bn; including higher cash taxes of US\$400-500m in '1 Mcq		8/4/16
All, Business	Other	Key risks are cable competition, lower capex, and Business revenue acceleration.	Jffrs	8/4/16

EXHIBIT 14B**2016 Q2 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
All, Consumer	Revenue, Margins, and Profits	Structural issues continue to plague CenturyLink, with another quarter of disappointing results, particularly Consumer metrics, and poor Managed Services results. Management reiterated that FY16 revenue will come in at the low end of guidance, and we believe achieving even the low end of FY16 EBITDA guidance will prove challenging. The root cause of pressures remains high margin legacy revenue losses not fully offset by lower margin strategic gains.	Jffrs	8/4/16
Business	Revenue, Margins, and Profits	Business customer migration from traditional voice and data to IP and Ethernet, creates instant margin pressure, and pricing for the new products remains fiercely competitive, weighing on revenue and margins going forward.	Jffrs	8/4/16
Business	Revenue, Margins, and Profits	Total business segment revenues declined 2% as growth in high bandwidth data Ethernet and MPLS was offset by declining legacy, low-bandwidth and hosting services.	Mcq	8/4/16
Business	Revenue, Margins, and Profits	Business	MS	8/4/16
Business	Revenue, Margins, and Profits	Business revenues (\$2,597m vs MSe \$2,601) declined 2.3% Y/Y. Strategic revenue (\$1,230m) increased 5.0% Y/Y (\$1,580m), and legacy revenue (\$1,244m) declined 7.4% Y/Y.	MS	8/4/16
Business	Revenue, Margins, and Profits	Strategic revenue segment growth benefitted from moving private line revenues from strategic to legacy.	MS	8/4/16
Business	Revenue, Margins, and Profits	It was encouraging to see high-bandwidth data services re-accelerate to 8.0% Y/Y growth... though the growth rate slowed from 10.3% in 2Q15.	MS	8/4/16
Consumer	Revenue, Margins, and Profits	On the Consumer side, we continue to question the logic of gunning for topline stability by offering much lower margin offerings such as Prism. We also question the profitability of "skinny bundles" and the pending OTT product, given CenturyLink's lack of scale as it relates to content buying power.	Jffrs	8/4/16
Consumer	Revenue, Margins, and Profits	Consumer	MS	8/4/16

EXHIBIT 14B

2016 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
Consumer	Revenue, Margins, and Profits	Consumer revenue decreased 0.6% Y/Y, with strategic revenue growth of +5.5% (MSe +5.2%) and legacy growth of -6.8% (MSe -5.0%)	MS	8/4/16
Consumer	Subscribers	#2 Consumer broadband metrics dominated the call	Mcq	8/4/16
Consumer	Subscribers	2Q metrics were below expectations at -65k net adds...focus on higher quality bundle subs away from standalone ones.	Mcq	8/4/16
Consumer	Subscribers	Drive higher sub activity in 2H and beyond: 1) improved sales order cycle; 2) upgrading 85%+ of the top 25 markets to 40Mbps+ speeds with 55%+ at 100Mbps+ by year-end '18. 3) video options such as DIRECTV wholesale, over-the-top offerings, and Prism TV.	Mcq	8/4/16
Consumer	Subscribers	Broadband net-adds (-66k) were notably weak (largest quarterly decline in last five years), as gross adds and churn fell below expectations, with the company noting that involuntary churn continues to linger.	MS	8/4/16
Consumer	Subscribers	Gross adds were impacted by the company pulling back on marketing stand-alone broadband	MS	8/4/16
Consumer, Business	Revenue, Margins, and Profits	CenturyLink posted mixed 2Q estimates, with higher than estimated voice and broadband losses but better financials, and lowered 3Q16 guidance. Revenue growth from the business side was over by 70bps while the consumer segment came in 40bps below.	JPM	8/4/16
Consumer, Business	Revenue, Margins, and Profits	Consumer revenue lower as sub losses were offset by price raises; EBITDA at the high end of guidance due to better revenue and lower SG&A.	JPM	8/4/16
Consumer, Business	Revenue, Margins, and Profits	2Q16 revenue of \$4.40b was slightly above ours and consensus of \$4.39b as mild underperformance in the consumer segment was more than offset by stronger business performance. EBITDA came in higher at \$1.637b on 37.2% margin vs. our \$1.610b and 36.7% and the street's \$1.62b as a result of lower SG&A both q/q and y/y with good consolidated revenue.	JPM	8/4/16
Consumer, SME	Subscribers	We believe consumers/SME will be more attracted to the higher-speed competitive offerings, even if slightly higher-priced, particularly if offered within a more compelling bundle.	Jffrs	8/4/16
All	Guidance and Forecasts	Our price objective of \$42 is based on a 6.2x 2016E EV/EBITDA multiple, in line with the RLEC avg. and conservative, in our view, given the proximity of positive revenue inflection and a superior collection of RLEC assets.	BoA	8/3/16

EXHIBIT 14B**2016 Q2 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
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Notes:

[1] Analyst reports were selected from the top four or five brokers and investment banks who most consistently issued reports on CenturyLink. The reports immediately following each earnings release were selected

[2] Bolded Text indicates that the entry was the heading of a section within the analyst report.

EXHIBIT 15A
EARNINGS RELEASE DATA - 2016, Q4

PR							
Section	Segment	Metric	Period	Value	Units	Trend	Quote
H/B	All	Op. Rev.	Q	4.29	\$B	down	lower voice, low-bandwidth data services, data integration revenues,
			A	17.5		down	partially offset by strategic revenue increases
H/B	All	Op. Income	Q	392	\$M	down	Generated operating income of \$392 million in fourth quarter; full-year
			A	2.3	\$B	down	2016 operating income of \$2.3 billion; reflects over \$200 million of expense incurred during fourth quarter 2016 due to severance costs related to a reduction in force and expenses associated with the pending Level 3 acquisition.
H	All	Op. Cash Flow	Q	1.59	\$B	down	Generated operating cash flow of \$1.59 billion and free cash flow of \$190 million in fourth quarter, both excluding special items
H/B	All	Op. Cash Flow	A	6.5	\$B	down	full-year 2016 operating cash flow of \$6.5 billion and free cash flow of \$1.8 billion, both excluding special items
H	All	Free Cash Flow	Q	190	\$M		Generated operating cash flow of \$1.59 billion and free cash flow of \$190 million in fourth quarter, both excluding special items
H	All	Free Cash Flow	A	1.8	\$B		full-year 2016 operating cash flow of \$6.5 billion and free cash flow of \$1.8 billion, both excluding special items
H	All	Net Income	Q	42	\$M	down	Achieved net income of \$42 million and diluted EPS of \$0.08 in fourth
		Diluted EPS		0.08	\$	down	quarter; full-year 2016 net income of \$626 million and diluted EPS of
		Net Income	A	626	\$M	down	\$1.16; reflects over \$200 million of expense incurred during fourth quarter
		Diluted EPS		1.16	\$	down	2016 as noted above.
H	All	Adj. Net Income	Q	292	\$M	down	Generated adjusted net income of \$292 million and adjusted diluted EPS of \$0.54, excluding special items, in fourth quarter; full-year 2016 adjusted net
		Adj. Diluted EPS		0.54	\$	down	income of \$1.3 billion and adjusted diluted EPS of \$2.45, excluding special items
		Adj. Net Income	A	1.3	\$B	down	
		Adj. Diluted EPS		2.45	\$	down	

EXHIBIT 15A
EARNINGS RELEASE DATA - 2016, Q4

PR Section	Segment	Metric	Period	Value	Units	Trend	Quote
H	All	100Mbps Addressable Units	A	3.3	units	up	Increased the percentage of addressable units capable of receiving 100Mbps and 1Gig broadband speeds year-over-year by 31% and 53%, respectively, ending the year with more than 3.3 million addressable units capable of
		1Gig Addressable Units		1.3	units	up	100Mbps or higher and approximately 1.3 million addressable units capable of 1Gig or higher
B	All	Op. Expenses	Q	3.9	\$B	up	Level 3 acquisition costs, increase in severance; excluding special items, 3.7BB compared to 3.71BB for Q4 2015
B	All	Op. Expenses	A	15.1	\$B	down	lower DA; excluding special items, 14.9 BB compared to 15.1 BB for Q4 2015
B	Business	Op. Rev.	Q	2.55	\$B	down	decline in legacy revenues, partially offset by growth in high-bandwidth data revenues
B	Business	Strategic Rev.	Q	1.23	\$B	up	
B	Consumer	Op. Rev.	Q	1.45	\$B	down	decline in legacy voice revenues, partially offset by growth in Prism TV revenues
B	Consumer	Strategic Rev.	Q	784	\$M	up	
G	All	Op. Rev.	A	17.05 - 17.3	\$B		
G	All	Core Rev.	A	15.25 - 15.5	\$B		
G	All	Op. Cash Flow	A	6.15 - 6.35	\$B		
G	All	Adj. Diluted EPS	A	2.1 - 2.3	\$		
G	All	Free Cash Flow	A	1.55 - 1.75	\$B		
G	All	Capital Expend.	A	2.6	\$B		

EXHIBIT 15A
EARNINGS RELEASE DATA - 2016, Q4

PR							
Section	Segment	Metric	Period	Value	Units	Trend	Quote
G	All	Op. Rev.	Q	4.23 - 4.29	\$B		
G	All	Core Rev.	Q	3.8 - 3.86	\$B		
G	All	Op. Cash Flow	Q	1.49 - 1.55	\$B		
G	All	Adj. Diluted EPS	Q	0.51 - 0.57	\$		

Number of Reported Values: 34 **Trend:** 5 Up
17 Down

EXHIBIT 15B
2016 Q4 Earnings Release Analyst Reports Major Themes

Major Themes

- Revenue and EBITDA came in at the low end or slightly below guidance. (4/5)
- Management guides to a weak 1Q'17 followed by a ramp up in 2H'17. Analysts express skepticism about the ramp up given the firm's '16 performance. (4/5)
- Merger with Level 3 pending. Some analysts express optimism, with JPM expecting slowing revenue decline as a result. (3/4)

Category 1	Category 2	Quotations	Report	Date
All	Guidance and Forecasts	Guidance Implies 2H Ramp, Again	Jffrs	2/9/17
All	Guidance and Forecasts	While the FY17 guidance was largely in line with our prior expectations, the 1Q outlook is weaker across all financial metrics, implying results should be back-end loaded. Given the similarities with 2016, which ultimately proved challenging, we expect a healthy degree of skepticism around the ability to ramp revenue throughout the year. The adj. EBITDA outlook was below expectations, and implies relatively flat cash opex despite on-going topline pressures, resulting in 100bps of margin contraction, at the midpoint.	Jffrs	2/9/17
All	Guidance and Forecasts	Our updated 2017 total revenue estimate (\$16.97b from \$17.20b – down 2.8% y/y vs guide to -1-2.5%) reflects continued declines in legacy revenue and data integration but some stabilization in consumer through the year.	JPM	2/9/17
All	Mergers & Acquisitions	Consolidated company offers revenue, stability, EBITDA growth for dividend sustainability	JPM	2/9/17
All	Mergers & Acquisitions	Using our updated numbers for CTL (excluding the datacenter sale, and with revenue slightly below the low-end of guide) and Level 3, we expect the combined company to show revenue decline of -1.7% in 2017 and -0.2% in 2018. Improvements are based on FX normalization and continued NA-enterprise stability for Level 3, and slowing broadband losses at CTL. Including \$200m of synergies in 2017 and \$400m in 2018 we slow EBITDA improvements and declining payout ratios, with a dividend payout ratio still in the 60%'s even when NOLs have run out.	JPM	2/9/17

EXHIBIT 15B
2016 Q4 Earnings Release Analyst Reports Major Themes

Category 1	Category 2	Quotations	Report	Date
All	Mergers & Acquisitions	Investment Thesis (Level 3)	JPM	2/9/17
All	Mergers & Acquisitions	We maintain our Overweight rating on Level 3 Communications and establish a Dec 2017 price target of \$63. In our view, Level 3 has great potential to gain share in the Enterprise telecommunications space from incumbent carriers from its current low single-digit market share level. The current TDM to Ethernet migration serves as an opening for Level 3 to get in the door as contracts with incumbent carriers at Enterprise customers come up for renewal.	JPM	2/9/17
All	Mergers & Acquisitions	The organic strength of the core business—particularly given the data center sale expected in March—offsets optimism around the pending CTL-LVLT deal. Though results were lackluster, management was clear on operational focus. Meanwhile, '17 guidance was respectable; however, adjusting for the data center sale, our numbers go lower. Our TP goes to US\$28 based on 5.75x '18E OCF.	Mcq	2/9/17
All	Mergers & Acquisitions	M&A saves the day	Mcq	2/9/17
All	Mergers & Acquisitions	The merger comes at the perfect time, when organic growth remains under pressure. Management said '16 results were not ideal, but noted that strategic revenue trends are improving. '16 initiatives will pay off in '17; these include: 1) on the consumer side, broadband retention tactics and faster speeds (31% more addressable units now receive 100Mbps); and 2) on the business side, a standardized Ethernet product, the launch of its SD-WAN offering, and a focus on the customer experience. We are modeling 1Q/'17 revenues and OCF of US\$4.27bn/US\$16.70bn and US\$1.54bn/US\$5.96bn	Mcq	2/9/17
All	Mergers & Acquisitions	Mixed quarter for pending acquisition partners	MS	2/9/17

EXHIBIT 15B**2016 Q4 Earnings Release Analyst Reports Major Themes**

Category 1	Category 2	Quotations	Report	Date
All	Mergers & Acquisitions	As CenturyLink and Level 3 prepare for a merger close “by September 30, 2017,” the companies delivered a double dose of earnings and conference calls after the close. Centurylink’s 4Q16 results and 2017 guidance generally came in below expectations as revenues declined 4.2% Y/Y, although they suggested that revenue trends could improve gradually through 2017 as enterprise bookings are improving. A 13% drop in 2017 capex expectations was a surprise. Level 3 results also came in light, impacted by FX and wholesale pressures, but the sequential improvement at North American Enterprise was encouraging. Their guidance for 2017 was fairly consistent with market expectations.	MS	2/9/17
All	Other	Further deterioration in economic fundamentals could impact revenue to the downside	JPM	2/9/17
All	Other	Further deterioration in economic fundamentals at the consumer or enterprise levels poses risk to access line and revenue trends as consumer markets could deteriorate from already high levels and the expected recovery in business markets could be pushed further out. This would also make it harder to gain traction with CenturyLink’s video and broadband revenue growth initiatives.	JPM	2/9/17
All	Other	Dividends, Leverage, and FCF	Mcq	2/9/17
All	Other	~US\$10bn in NOLs from Level 3 will increase its financial stability. This combined with higher EPS should drive the ~88% dividend payout ratio lower; management’s expectations are for a drop to ~60% 3-4 years post deal. Meanwhile, with data center divestment proceeds used for Level 3, we view a target leverage level of 3x 4.5 years post deal as achievable.	Mcq	2/9/17
All	Revenue, Margins, and Profits	4Q EBITDA in-line	BoA	2/8/17
All	Revenue, Margins, and Profits	CTL reported total revenue of \$4.289b which compares to our estimate of \$4.33b and consensus of \$4.33b and in the middle of the guidance range of \$4.28-4.34b. Adjusted EBITDA of \$1.588b compares to our \$1.60b and consensus of \$1.6b and also within the guidance range of \$1.58-1.64b on margins of 37.0% vs. our 37.0%. Adj. EPS of \$0.54 compares to the guidance range of \$0.53-0.59 and above our \$0.52. FCF of \$190m was in-line with our \$206m and the Street at \$197m.	BoA	2/8/17

EXHIBIT 15B
2016 Q4 Earnings Release Analyst Reports Major Themes

Category 1	Category 2	Quotations	Report	Date
All	Revenue, Margins, and Profits	Results generally fell short of expectations, and even a \$40mn one-time expense benefit could not lift adj. EBITDA to expected levels. While headline guidance may not have been as bad as some feared, the implied ramp in 2H17 will likely fuel further skepticism. We see modest risk to the revenue outlook. Nevertheless, deal benefits remain intact and provide much needed dividend support.	Jffrs	2/9/17
All	Revenue, Margins, and Profits	EBITDA Miss, Despite 1x Benefits	Jffrs	2/9/17
All	Revenue, Margins, and Profits	CTL reported weaker than expected adj. EBITDA of \$1.59bn, below our/Street \$1.61bn estimates. Results included a \$40mn non-recurring expense true-up benefit, indicating a much larger miss without the help (~4.9% below expectations). While force reductions began in the quarter, there was only nominal benefit, with most of the impact from the 7-8% employee reduction costs expected to flow through in 1H17.	Jffrs	2/9/17
All	Guidance and Forecasts	CenturyLink - update revenue and EBITDA estimates to reflect new guidance; back-half revenue ramp could be optimistic	JPM	2/9/17
All	Guidance and Forecasts	CTL guided to disappointing 1Q17 revenue but a ramp in the back half of 2017, worrying given the company's history and potential distractions of the Level 3 deal closing in 3Q.	JPM	2/9/17
All	Revenue, Margins, and Profits	CTL 4Q16 revenue in-line on data integration, EPS a bit light	JPM	2/9/17
All	Revenue, Margins, and Profits	CenturyLink total revenue of \$4.29b was slightly lower than our estimate of \$4.30b, while Strategic Revenue of \$3.86 was below our \$3.89 and at the low-end of guidance of \$3.86-3.92b. EBITDA missed at \$1.588b vs our \$1.613b. HSI losses of 5k were worse than we expected but better than consensus, and Prism adds were also below.	JPM	2/9/17
All	Revenue, Margins, and Profits	Revenue pressures continued in 4Q	MS	2/9/17

EXHIBIT 15B**2016 Q4 Earnings Release Analyst Reports Major Themes**

Category 1	Category 2	Quotations	Report	Date
All	Revenue, Margins, and Profits	CenturyLink saw 4Q revenues drop 4.2% Y/Y versus our expectation of a 3.1% decline while Level 3's revenues dropped 1.0% Y/Y versus our expectations of a 0.4% Y/Y increase. CenturyLink saw softer results from a variety of categories which they are addressing by reorganizations and new products, while Level 3 cited M&A related churn in wholesale as well as FX pressures. Both companies expressed hope for better trends in 2017.	MS	2/9/17
All	Subscribers	We are slightly below the low-end of FY revenue guidance, and at the low end of EBITDA guide, but have some hope that CTL's expectation for improved broadband subscribers given its upgraded offers and ramping business backlog will drive us higher.	JPM	2/9/17
Consumer, Business	Other	With Consumer adds positive in 4Q and CAF- II markets coming online throughout 2017 (expect 40% buildout by YE17 , implying ~475k locations), management is hopeful the company could turn the corner with positive net adds this year.	Jffrs	2/9/17
Consumer, Business	Revenue, Margins, and Profits	4Q Weakness Across Business and Consumer	Jffrs	2/9/17
Consumer, Business	Revenue, Margins, and Profits	Total revenue of \$4.29bn was ~0.9% below our/Street estimates, with weaker results across all segments. Legacy declines accelerated to 9.3%, as lower voice and low bandwidth data service revenues continued to weigh.	Jffrs	2/9/17
Consumer, Business	Revenue, Margins, and Profits	Strategic revenue growth of 1.2% was also below expectations, decelerating from recent levels, (4.5% growth in 3Q16) given slower growth of High-bandwidth data services and Consumer broadband. Despite 4Q revenue weakness, broadband volumes were a bright spot, declining 5k vs. our 15k estimate	Jffrs	2/9/17
Consumer, Business	Subscribers	Metrics ahead of estimates	BoA	2/8/17
Consumer, Business	Subscribers	CenturyLink reported -5k DSL net adds, better than our -30k net add estimate and improved from 3Q (-40k) and compares to the Street at -20k. CTL added +7k PrismTV adds (vs. +7k in 3Q16) bringing total Prism subscribers to 325k. Access lines declined -5.6% y/y, better than our -5.9% and 3Q of -5.7%. We will look for more color on the trends CenturyLink expects to see for both PrismTV and broadband net adds heading into 2017.	BoA	2/8/17

EXHIBIT 15B**2016 Q4 Earnings Release Analyst Reports Major Themes**

Category 1	Category 2	Quotations	Report	Date
Consumer, Business	Subscribers	What We Liked	MS	2/9/17
Consumer, Business	Subscribers	Broadband net adds (-5k) beat our estimate (-20k), and the trend has improved for two consecutive quarters. CAF II benefits should start to kick in this year.	MS	2/9/17
Consumer, Business	Subscribers	What looked good in Q4?	MS	2/9/17
Consumer, Business	Subscribers	-CenturyLink broadband losses slowed to just 5k in the quarter. The company cited lower churn and the success of their network upgrade program. -Level 3 grew NA CNS enterprise revenues 1.6% sequentially. This addressed a key area of softness and investor concerns in recent quarters due to churn among smaller customers. The company further expects better trends in 2017 than 2016.	MS	2/9/17

Notes:

[1] Analyst reports were selected from the top four or five brokers and investment banks who most consistently issued reports on CenturyLink. The reports immediately following each earnings release were selected

[2] Bolded Text indicates that the entry was the heading of a section within the analyst report.

EXHIBIT 16A
EARNINGS RELEASE DATA - 2017, Q2

PR Section	Segment	Metric	Period	Value	Units	Trend	Quote
H/B	All	Op. Rev.	Q	4.09	\$B	down	driven by the decline in legacy revenues, as well as the revenue reduction due to the Colocation Sale effective May 1, 2017.
H/B	All	Op. Income	Q	367	\$M	down	Generated operating income of \$367 million in second quarter, which reflects approximately \$150 million of one-time charges related to the sale of the data centers and colocation business on May 1, 2017 (Colocation Sale)
H	All	EBITDA	Q	1.44	\$B	down	Generated adjusted EBITDA of \$1.44 billion in second quarter, excluding special items
H/B	All	Net Income	Q	17	\$M	down	Achieved second quarter net income of \$17 million and diluted EPS of
		Diluted EPS		0.03	\$	down	\$0.03, which reflect a negative net income effect of approximately \$115 million (\$0.21 per share) of one-time charges related to the Colocation Sale
H/B	All	Adj. Net Income	Q	251	\$M	down	Generated adjusted net income of \$251 million and adjusted diluted EPS of
		Adj. Diluted EPS		0.46	\$	down	\$0.46, excluding special items, in second quarter due to lower adjusted net income.
H	All	100Mbps+ Addressable Units	Q	3.8	million units		Continued to invest to drive higher broadband speeds throughout our footprint; ended the quarter with more than 3.8 million addressable units capable of speeds of 100Mbps or higher and more than 1.5 million
		1Gig+ Addressable Units		1.5			addressable units capable of 1Gig or higher
B	All	Core Rev.	Q	3.66	\$B	down	
B	Enterprise	Rev.	Q	2.22	\$B	down	primarily due to the revenue reduction associated with the Colocation Sale, as well as the decline in legacy revenues.
B	Consumer	Rev.	Q	1.40	\$B	down	primarily due to a decline in legacy voice revenues, as well as lower broadband and video revenues driven by increased cable competition and the impact of the restructuring of a satellite video contract in first quarter. The company is seeing strong customer demand in those markets where higher speeds and its "Price for Life" simplified offering have been deployed.

EXHIBIT 16A
EARNINGS RELEASE DATA - 2017, Q2

PR							
Section	Segment	Metric	Period	Value	Units	Trend	Quote
B	All	Op. Expenses	Q	3.72	\$B	down	driven by a reduction in depreciation expense and lower salaries and wages expense related to the headcount reduction in fourth quarter 2016, partially offset by one-time charges related to the Colocation Sale.
B	All	Op. Expense (Excluding Special Items)	Q	3.55	\$B	down	
B	All	Adj. EBITDA	Q	1.44	\$B	down	due to the decline in operating revenues outlined above, partially offset by lower operating expenses.
G	All	Op. Rev.	Q	4.06 - 4.12	billion		
G	All	Core Rev.	Q	3.59 - 3.65	billion		
G	All	Adj. EBITDA	Q	1.43 - 1.49	billion		
G	All	Adj. Diluted EPS	Q	0.44 - 0.50	\$		
Number of Reported Values:				19	Trend:	0 Up 13 Down	

EXHIBIT 16B**2017 Q2 Earnings Release Analyst Reports Major Themes*****Major Themes***

- All of the analyst reports identified increased cable competition as a current and potential future threat. Management attributed a 77k net loss in broadband to cable competition. (5/5)
- The approaching merger with Level 3 was generally predicted to have a positive or very positive impact on CTL. Few analysts expressed any concern regarding regulatory oversight. (5/5)
- EBITDA was inline with guidance, although there was disagreement among analysts on its significance. (4/5)
- Less than half of the analyst reports reviewed mentioned the lawsuit alleging cramming. J.P. Morgan's report stated that, "We believe fears are overdone." (2/5)

Category 1	Category2	Quotations	Report	Date
All	Revenue, Margins, and Profits	Results were largely in-line with expectations, yet the outlook for FY17 was tempered; management was more cautious regarding revenue stabilization, and indicated that EBITDA would come in at the low end of the range even with strong cost management.	Jffrs	8/3/17
All	Revenue, Margins, and Profits	Revenue and EPS guidance was reduced as pressures within high-margin Legacy revenue continue to weigh on results.	Jffrs	8/3/17
All	Revenue, Margins, and Profits	Financials In-Line While Metrics Disappoint .	Jffrs	8/3/17
All	Revenue, Margins, and Profits	Total revenue of \$4.09bn was in-line with our/Street estimates, but included a \$12mn benefit from the change in accounting related to the data center sale.	Jffrs	8/3/17
All	Revenue, Margins, and Profits	Both Legacy and Strategic Services were modestly weaker. Legacy declines were 9.7%, a slight acceleration from the 1Q decline, with y/y pressures impacted by the 1Q satellite contract renegotiation. Strategic revenue declined 6.2%, though excluding the \$100mn impact from the colo sale, the segment was down ~1.3%.	Jffrs	8/3/17

EXHIBIT 16B
2017 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
Consumer	Subscriber	Broadband net losses of 77k disappointed , with management noting elevated cable competition. While 3Q consumer broadband should continue to be under pressure, the company indicated possible reversion to unit growth in 4Q; we are more skeptical.	Jffrs	8/3/17
All	Revenue, Margins, and Profits	EBITDA Benefits from Accounting Change.	Jffrs	8/3/17
All	Revenue, Margins, and Profits	While reported EBITDA of \$1.43bn was in- line with expectations, excluding the \$15mn benefit from the accounting change, results were modestly below.	Jffrs	8/3/17
All	Revenue, Margins, and Profits	Of the nearly \$135mn reduction in operating expenses versus the prior year, ~45% came from the sale of the colo business, with the remainder from lower employee-related costs.	Jffrs	8/3/17
All	Revenue, Margins, and Profits	As the company continues to lose high margin legacy revenues, we are cautious on the ability to stabilize revenues while also continuing to cut costs.	Jffrs	8/3/17
All	Guidance and Forecasts	Outlook Remains Aggressive .	Jffrs	8/3/17
All	Guidance and Forecasts	While prior management revenue targets appeared lofty (implied \$70mn acceleration in both high-bandwidth and managed services in 2H), unanticipated pressures lowered the revenue outlook to below the guide.	Jffrs	8/3/17
All	Guidance and Forecasts	Continued cost management around headcount reduction, network, and facility costs, kept the outlook for EBITDA and Free Cash Flow within the guide, albeit at the low end.	Jffrs	8/3/17
All	Guidance and Forecasts	Valuation/Risks	Jffrs	8/3/17
All	Guidance and Forecasts	Our \$22 year-end 2017 price target (previous \$23) is based on a target multiple of 7.0x our pro-forma 2018E EBITDA.	Jffrs	8/3/17
All	Guidance and Forecasts	Key risks are cable competition, Business revenue acceleration, and integration.	Jffrs	8/3/17
All	Guidance and Forecasts	Target Investment Thesis	Jffrs	8/3/17

EXHIBIT 16B
2017 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Guidance and Forecasts	The LVLTL deal improves CTL's revenue and EBITDA trends, particularly as operational synergies ramp	Jffrs	8/3/17
All	Guidance and Forecasts	Synergies and taxes drive FCF accretion and provide dividend support for the next few years	Jffrs	8/3/17
All	Guidance and Forecasts	Deal likely to be approved in 3Q17, with little or no conditions	Jffrs	8/3/17
All	Guidance and Forecasts	YE17 Target of \$22 based on pro forma multiple analysis.	Jffrs	8/3/17
All	Guidance and Forecasts	Upside Scenario	Jffrs	8/3/17
All	Guidance and Forecasts	Greater than expected synergies, NOLs and strong deal execution improve FCF and dividend coverage	Jffrs	8/3/17
All	Guidance and Forecasts	Cost cutting initiatives could help stabilize EBITDA trends, boosting FCF and dividend support	Jffrs	8/3/17
All	Guidance and Forecasts	Improved regulatory environment supports network monetization initiatives	Jffrs	8/3/17
All	Guidance and Forecasts	Potential tax reform carries modest benefit given sizable NOLs	Jffrs	8/3/17
All	Guidance and Forecasts	YE17 Target of \$27 based on multiples.	Jffrs	8/3/17
All	Guidance and Forecasts	Downside Scenario	Jffrs	8/3/17
All	Guidance and Forecasts	High exposure to legacy revenue suggests continued margin and FCF pressures	Jffrs	8/3/17
All	Guidance and Forecasts	Disadvantaged Consumer business cedes share to Cable at an accelerated rate	Jffrs	8/3/17
All	Guidance and Forecasts	Rising cash taxes and falling margins pressure FCF and precipitate a dividend cut	Jffrs	8/3/17
All	Guidance and Forecasts	Sizable integration poses risk to enterprise sales momentum	Jffrs	8/3/17
All	Guidance and Forecasts	YE17 Target of \$15 based on standalone DCF and multiple analysis.	Jffrs	8/3/17

EXHIBIT 16B
2017 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Mergers & Acquisitions	Other Considerations	Jffrs	8/3/17
All	Mergers & Acquisitions	CenturyLink agreed to acquire Level3 for \$34bn, or ~11x 2017E EBITDA. The deal is expected to close in 3Q17.	Jffrs	8/3/17
All	Mergers & Acquisitions	Potential repeal of Title II and Net Neutrality regulation under the Trump administration	Jffrs	8/3/17
All	Mergers & Acquisitions	Acquisition of Level3	Jffrs	8/3/17
All	Mergers & Acquisitions	The company's pending acquisition of Level 3 would position the combined company as the second largest provider of enterprise services in the US.	Jffrs	8/3/17
All	Revenue, Margins, and Profits	Merger thesis intact – neither report terribly impressive but CTL in particular was better than feared	JPM	8/3/17
All	Revenue, Margins, and Profits	Both companies' [CenturyLink and Level 3] 2Q results were mixed vs consensus, but each offered strong commentary about improved sales trends through the year and hope for a better 2H.	JPM	8/3/17
All	Revenue, Margins, and Profits	CTL met 2Q guide but dropped official 2017 guidance because of the pending deal and expects revenue and EPS to be "slightly below" the low end of previous guide, but EBITDA and FCF to be near the low-end of guide. With CTL shares having fallen 22% from their high in June we believe a weaker 2Q and outlook were already built into the stock.	JPM	8/3/17
All	Lawsuit	Management provided little commentary regarding the recent lawsuit but we believe that fears are overdone.	JPM	8/3/17
All	Guidance and Forecasts	Today, with CTL trading at \$23.74/share or a 9.1% dividend yield we believe the stock should be attractive to income-oriented investors as we see limited downside risk and expect to see shares trading toward our new EOY2018 \$28 stand-alone price target.	JPM	8/3/17
All	Guidance and Forecasts	Consolidated company offers limited revenue declines, EBITDA growth for dividend sustainability	JPM	8/3/17

EXHIBIT 16B
2017 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Guidance and Forecasts	Using our updated numbers for CTL (pro forma for the datacenter sale, and with revenue slightly below the low-end of guide) [...] we expect the combined company [including Level 3] to show revenue decline of -3.8% in 2017 and -1.0% in 2018 (pro forma for datacenter sale). Improvements are based on [...] slowing enterprise sales improvements as well as slower broadband losses at CTL.	JPM	8/3/17
All	Guidance and Forecasts	Post deal we expect steady EBITDA improvements and declining payout ratios, with a dividend payout ratio still in the 60%'s even when NOLs have run out. With LVLT Jeff Storey joining as COO and eventually CEO of the combined company we are more confident now of the company's ability to execute against our EBITDA targets, though we would not be surprised to see revenue somewhat lower if Storey choses to pare back on some of the less profitable revenue efforts of CTL.	JPM	8/3/17
All	Guidance and Forecasts	Merger model – we estimate 12.9% FCF yield with 70% payout ratio in 2018 including 50% of run-rate synergies.	JPM	8/3/17
All	Guidance and Forecasts	We believe the Level 3 deal is a significant positive for CTL as it brings a higher enterprise mix (~75% of pro forma revenue), increased scale, better revenue and EBITDA trends, and tax protection to help CTL pay its dividend.	JPM	8/3/17
All	Guidance and Forecasts	CenturyLink – update revenue and EBITDA estimates to reflect new guidance; better “funnel” adds confidence in back-half revenue ramp.	JPM	8/3/17
All	Guidance and Forecasts	CTL continues to expect a solid ramp in the back half of 2017, however guidance was not updated for the year due to the pending LVLT acquisition.	JPM	8/3/17
Consumer, Business	Guidance and Forecasts	Commentary around video efforts – OTT and Prism TV seem to have been tamped down, and the company seems less enamored by video now that the OTT ecosystem seems to have bloomed.	JPM	8/3/17
All	Guidance and Forecasts	We are now toward the low-end of 3Q guidance and slightly below the low-end of previous FY revenue guidance, and near the low-end of EBITDA guide.	JPM	8/3/17
All	Guidance and Forecasts	Our updated 2017 total revenue estimate (\$16.43b – down 5.9% y/y) reflects continued declines in legacy revenue and data integration but some improvements in consumer through the back half.	JPM	8/3/17
All	Guidance and Forecasts	As a result of continued revenue pressure, we estimate EBITDA of \$1.46b in 3Q17 and \$5.92b for 2017.	JPM	8/3/17

EXHIBIT 16B
2017 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Revenue, Margins, and Profits	CTL 2Q17 revenue and EBITDA beat, 3Q guide light; FY revenue expected to be below prior guide while EBITDA around the low-end.	JPM	8/3/17
All	Revenue, Margins, and Profits	CenturyLink total revenue of \$4.090b was nicely within the range of \$4.07-4.13b, was in-line with consensus, and beat our \$4.069b, while Strategic Revenue of \$3.655b was a touch below the low-end of guidance of \$3.66-3.72b. EBITDA though was \$1.442b vs our \$1.424 and consensus \$1.43b, beating the mid-range of guide.	JPM	8/3/17
Consumer, Business	Subscriber	HSI subs of -77k were worse than we expected on higher cable competition and access line declines continue unabated at -6% y/y.	JPM	8/3/17
All	Revenue, Margins, and Profits	LVLT revenue better on NA wholesale, but NA Enterprise +0.1% q/q was soft. Customer “funnel” continues to pick up as guide unchanged.	JPM	8/3/17
All	Guidance and Forecasts	Investment Thesis	JPM	8/3/17
All	Guidance and Forecasts	We now have more confidence in the value of CTL due to the positive implications of the Level 3 deal.	JPM	8/3/17
All	Guidance and Forecasts	We believe the Level 3 deal is a significant positive for CTL as it brings a higher enterprise mix (~75% of pro forma revenue), increased scale, revenue and EBITDA stability, and tax protection to help CTL pay its dividend.	JPM	8/3/17
All	Guidance and Forecasts	Valuation	JPM	8/3/17
All	Guidance and Forecasts	We establish a YE18 price target of \$28 (unchanged from YE17).	JPM	8/3/17
All	Guidance and Forecasts	Further deterioration in economic fundamentals could impact revenue to the downside	JPM	8/3/17
All	Guidance and Forecasts	Further deterioration in economic fundamentals at the consumer or enterprise levels poses risk to access line and revenue trends as consumer markets could deteriorate from already high levels and the expected recovery in business markets could be pushed further out. This would also make it harder to gain traction with CenturyLink’s video and broadband revenue growth initiatives.	JPM	8/3/17
Consumer, Business	Guidance and Forecasts	Competitive pressures in consumer could pose challenges	JPM	8/3/17

EXHIBIT 16B
2017 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
Consumer, Business	Guidance and Forecasts	Consumer voice, broadband, and video make up 39% of the revenue base of the legacy CTL, and will comprise under 25% after the Level 3 deal – much of this is in urban and relatively competitive markets. CenturyLink has struggled competitively in those markets thus far, and the company may face challenges in improving operating metrics in these properties given the high level of competition from cable and CLEC operators.	JPM	8/3/17
All	Guidance and Forecasts	Level 3 integration could be more difficult than expected	JPM	8/3/17
All	Guidance and Forecasts	While Level 3 has a solid record of integrating acquisitions, CenturyLink has struggled with its recent enterprise operations and in integrating acquisitions. With CenturyLink managing and controlling the combined entity, synergies and revenue stability could take longer to materialize than we expect.	JPM	8/3/17
All	Lawsuit	Class-action lawsuits impacts may be greater than expected	JPM	8/3/17
All	Lawsuit	A lawsuit filed in June stemmed a flurry of class-action lawsuits in several states alleging that sales agents billed customers higher amounts than quoted prices for internet and cable television service. While we view the case to be similar to other cramming cases, claims are as high as \$12b.	JPM	8/3/17
All	Lawsuit	If the investigation proves that the cramming cases are more serious than expected, we could see damage to the company resulting from large settlement fees and reputational impacts.	JPM	8/3/17
All	Lawsuit	Depending on the severity, the merger with Level 3 could be compromised.	JPM	8/3/17
All	Revenue, Margins, and Profits	2Q17 Quick Comment: CenturyLink Mixed, Level 3 Solid	MS	8/3/17
All	Revenue, Margins, and Profits	This is likely the last quarterly report for the companies as stand alone entities. We believe investor focus will increasingly shift to merger execution and realizing the large synergy and tax reduction opportunities, which in turn should provide strong dividend support, and valuation support.	MS	8/3/17
All	Revenue, Margins, and Profits	CenturyLink Quick take	MS	8/3/17

EXHIBIT 16B

2017 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Revenue, Margins, and Profits	CenturyLink reported 2Q17 revenue/EBITDA in-line with expectations; however, core revenue was light driven by lower than expected 1) legacy revenue 2) high-bandwidth data services, and 3) consumer strategic revenue.	MS	8/3/17
Consumer, Business	Revenue, Margins, and Profits	The miss in high bandwidth data services was impacted by a contracted price reduction, which began in 2Q17. Adjusting for the contract price reduction and a favorable settlement in 2Q16, high-bandwidth data services grew 5% Y/Y (vs 4% in 1Q17), vs the reported +1%.	MS	8/3/17
Consumer	Subscriber	The miss in consumer was driven by continued subscriber weakness, as broadband losses increased Y/Y, from -66k to -77k. The company expects subscriber adds to grow Q/Q in 3Q17 and 4Q17.	MS	8/3/17
All	Revenue, Margins, and Profits	On the positive side, IT Managed Services revenue was better than expected, increasing 7% Q/Q, and the company expects more growth in 2H17.	MS	8/3/17
All	Guidance and Forecasts	3Q17 guidance was slightly below MSe, but in-line with consensus.	MS	8/3/17
All	Guidance and Forecasts	The company expects both improving revenue and cost trends to contribute to the 2H17 EBITDA growth.	MS	8/3/17
All	Guidance and Forecasts	The company noted that June was one of the "strongest sales month in quite a while". Specifically, CenturyLink expects 3Q to show more improvement in MPLS Ethernet (high-bandwidth data services), VoIP, IT Managed Services, and Data Integration (which is usually back end load, albeit at a very low margin). The company also expects to improve on the ~\$50M Q/Q declines in legacy revenue.	MS	8/3/17
All	Guidance and Forecasts	On the expense side, CenturyLink expects more benefit from headcount attrition, and network and facility costs. The 3Q guidance already bakes in higher seasonal overtime costs, which should normalize in 4Q.	MS	8/3/17
All	Guidance and Forecasts	Level 3 Quick take	MS	8/3/17
All	Guidance and Forecasts	Guidance reiterated.	MS	8/3/17
All	Guidance and Forecasts	Management maintained every line item of full year guidance, including FCF of \$1.1-1.16B. With FCF of just \$404M in 1H17, this implies an 79.7% improvement in FCF between 1H17 and 2H17, in order to reach the midpoint of guidance.	MS	8/3/17

EXHIBIT 16B**2017 Q2 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
All	Lawsuit	Merger / Lawsuit Commentary	MS	8/3/17
All	Mergers & Acquisitions	CenturyLink is working with two more states (New Jersey and California), the DOJ and the FCC to clear the final merger hurdles. The company doesn't expect any hurdles between now and close, and still expects to close the merger by the end of September.	MS	8/3/17
All	Lawsuit	Regarding the lawsuit, the company reiterated they continue to investigate the allegations, and they hired a law firm to conduct a separate independent review.	MS	8/3/17
Consumer, Business	Guidance and Forecasts	CTL.N	MS	8/3/17
Consumer, Business	Guidance and Forecasts	Our base case: Guidance met / deal closes as expected – Management delivers on sequential revenue growth in 2H17, in-line with guidance, led by improvements in high bandwidth data services and consumer. Broadband net adds turn positive for the first time since 2014, and the company is able to improve margin trends with its OTT video offering.	MS	8/3/17
All	Guidance and Forecasts	Risks to achieving price target: LVLT approval/integration challenges; Cable competition (90%+ overlap); Macro pressure on enterprise revenue; Cloud price cuts from Amazon, Google, and Microsoft; Margin pressure from revenue mix shift; Increased Regulatory Pressure; Pension/OPEB obligations	MS	8/3/17
All	Guidance and Forecasts	LVLT.N: Key Risks	MS	8/3/17
All	Guidance and Forecasts	Falling Prices - Over build-outs of fiber from the 1990s continue to cause double digit annual pricing declines for some bandwidth products	MS	8/3/17
All	Guidance and Forecasts	Moderate Leverage - Level 3 is ~3x levered and it aims to be at the low end of 3- 5x	MS	8/3/17
All	Guidance and Forecasts	Rising Capex - If demand increases, capital intensity could move above 15% levels.	MS	8/3/17
All	Guidance and Forecasts	Valuation	MS	8/3/17
All	Guidance and Forecasts	Our \$65 valuation is based on the proposed acquisition price by CenturyLink: \$26 cash + 1.4286 * \$27 (CTL price target).	MS	8/3/17
All	Revenue, Margins, and Profits	Event	Mcq	8/2/17

EXHIBIT 16B

2017 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Revenue, Margins, and Profits	Given AT&T's business solutions results and seasonal pressures on the consumer side, we were pleasantly surprised to see a respectable 2Q.	Mcq	8/2/17
All	Revenue, Margins, and Profits	By the end of September (two additional state approvals needed), CTL-LVLT will be the second largest enterprise solutions business with a 75/25 enterprise/consumer mix.	Mcq	8/2/17
All	Revenue, Margins, and Profits	Importantly, we think a new and impressive leadership team will steer growth in the right direction. This increases our confidence in execution and lowers integration risk, which could re-rate the multiple as CTL trades at ~1x below peers T/VZ.	Mcq	8/2/17
All	Revenue, Margins, and Profits	Impact	Mcq	8/2/17
Consumer, Business	Revenue, Margins, and Profits	1) Enterprise high-bandwidth data and IT/management services were relatively flat, as MPLS growth offset continued declines in Ethernet. Strategic services declined ~6% YoY due to the colo sale while legacy declined ~10% from soft voice and low-bandwidth data revenues. <u>Management remains confident in 2H/long-term growth:</u> CenturyLink recently added 2k MPLS customers, which should accelerate growth in 2H while cyber-security, big data, and IT services should drive healthy growth.	Mcq	8/2/17
Consumer	Subscriber	2) 'Price for Life' should help pick up activity in 2H. The consumer segment lost 65k broadband subs due to cable competition and video was impacted by the restructuring of satellite TV contracts. Management has removed low-priced promos, increased credit standards, and is refocusing Prism to profitability, all of which will continue to improve ARPU, customer lifetime value, and long-term churn. As of 2Q, 3.8m+ units have access to 100Mbps+ and in markets with 40Mbps, penetration is good.	Mcq	8/2/17
All	Revenue, Margins, and Profits	3) 3Q FCF should ramp up due to seasonality and lower capex, offset by a US\$100m voluntary pension contribution. The potential FCF growth is high, as they leverage US\$10bn of NOLs from Level 3, realize synergies, and delever.	Mcq	8/2/17
All	Guidance and Forecasts	4) We look forward to 9/30: Level 3 will boost scale, footprint, and expertise so that NewCo can capitalize on the mid-single digit and mid/upper-single-digit growth at enterprise high-bandwidth data services and managed network services.	Mcq	8/2/17

EXHIBIT 16B
2017 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Guidance and Forecasts	We have increased confidence in management's ability to hit annual run-rate synergies of US\$975m (US\$850m/US\$125m in opex/capex). Level 3 CEO Jeff Storey will serve as President and COO; he will then take over as CEO on 1/1/19. (Fig. 1).	Mcq	8/2/17
All	Guidance and Forecasts	Earnings and target price revision	Mcq	8/2/17
All	Guidance and Forecasts	Our '17/'18 EBITDA ests go down 3%/1% to US\$5.87bn/US\$5.92bn; TP to US\$27 from US\$28.	Mcq	8/2/17
All	Guidance and Forecasts	Price catalyst	Mcq	8/2/17
All	Guidance and Forecasts	Catalyst: deal close, integration, enterprise and consumer trends.	Mcq	8/2/17
All	Revenue, Margins, and Profits	First look 2Q: Revs, EBITDA in-line, expecting 3Q & 4Q Q/Q EBITDA growth	BoA	8/2/17
All	Revenue, Margins, and Profits	2Q revenue, EBITDA in-line	BoA	8/2/17
All	Revenue, Margins, and Profits	CTL reported total revenue of \$4.090b that was in-line with our estimate of \$4.087b and consensus of \$4.089b and within the guidance range of \$4.07-4.13b.	BoA	8/2/17
All	Revenue, Margins, and Profits	Adjusted EBITDA of \$1.442b was also in-line with our \$1.43b and consensus of \$1.43b and slightly above the midpoint of the guidance range of \$1.40-1.46b on margins of 35.3% vs. our 35.0%.	BoA	8/2/17
All	Revenue, Margins, and Profits	FCF of -\$52m was below our \$263m driven by the timing of higher cash taxes of \$265m vs. our \$106m and higher capex of \$829m vs. our \$633m and the Street at \$604m.	BoA	8/2/17
All	Revenue, Margins, and Profits	CenturyLink noted that it accelerated capital investment in 2Q and continues to guide to \$2.6b for the full year.	BoA	8/2/17

EXHIBIT 16B

2017 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Guidance and Forecasts	Based on our conversations with investors regarding expectations for the quarter, we believe the consensus concern was that 2Q results might disappoint for secular or company-specific reasons and guidance was at risk. We believe the 2Q results, 3Q and full year EBITDA guide taken as a whole should be wellreceived by the market.	BoA	8/2/17
Consumer, Business	Subscriber	Metrics	BoA	8/2/17
Consumer, Business	Subscriber	CenturyLink reported -77k DSL net adds, below our -30k net add estimate, the Street at -52k and compares to 2Q16 at -66k.	BoA	8/2/17
Consumer, Business	Subscriber	Access lines declined by -212k vs. 2Q16 of -198k.	BoA	8/2/17
Consumer, Business	Subscriber	CenturyLink expects to see broadband net adds improve in 3Q and grow in absolute terms in 4Q as the company is seeing record low churn and is having success pushing back against more aggressive cable 1Gig promotions.	BoA	8/2/17
All	Guidance and Forecasts	3Q and full year guide sees sequential EBITDA increases	BoA	8/2/17
All	Guidance and Forecasts	CTL expects operating revenue of \$4.06-4.12b which puts our \$4.05bn below the low end and the Street at \$4.09bn in the middle of the range.	BoA	8/2/17
All	Guidance and Forecasts	EBITDA guidance of \$1.43b to \$1.49bn puts our \$1.456bn and consensus of \$1.453bn in the middle of the range.	BoA	8/2/17
All	Guidance and Forecasts	Adj. diluted EPS guidance is \$0.44-0.50 and compares with consensus of \$0.51and our \$0.47.	BoA	8/2/17
All	Guidance and Forecasts	CenturyLink believes FY17 EBITDA and free cash flow will come in near the lower end of prior full year guidance. Still, looking at 1Q and 2Q reported EBITDA and the mid-point of 3Q guidance, the low end of prior guidance implies continued Q/Q growth in 4Q to over \$1.5bn. While perhaps aspirational, we view the comments at this point mid-year as directionally encouraging.	BoA	8/2/17
All	Mergers & Acquisitions	Accretive LVLTL merger expected to close this quarter	BoA	8/2/17

EXHIBIT 16B

2017 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Mergers & Acquisitions	We continue to believe that the Level 3 merger is a positive for CenturyLink as it helps stabilize the company's EBITDA, revenue, and free cash flow trajectory. Level 3's substantial accumulated net operating tax loss carryforwards (NOLs) will help offset CTL's rising cash taxes as the benefits from prior bonus tax depreciation rules begin to unwind. In all, the deal will help provide more coverage to the dividend.	BoA	8/2/17
All	Guidance and Forecasts	Price objective basis & risk: CenturyLink (CTL)	BoA	8/2/17
All	Guidance and Forecasts	Risks to our PO are increased competition from wireless and cable, overachieving regulatory reform, increased dividend taxes and LVLV vote approval and deal integration.	BoA	8/2/17
All	Guidance and Forecasts	2Q Wrap: Stock should be up on 2Q print; surprise WIN div cut hits stock	BoA	8/3/17
All	Guidance and Forecasts	No Windstream read through, stock should be up on 2Q	BoA	8/3/17
All	Guidance and Forecasts	There is no read through from the Windstream dividend cut to CTL in our view. CTL highlighted its best ever customer broadband churn, improving gross add growth and post-Qwest merger best Enterprise services sales. CTL is guiding to sequential revenue stability and EBITDA growth in 3Q.	BoA	8/3/17
All	Guidance and Forecasts	Reiterate Buy	BoA	8/3/17
All	Guidance and Forecasts	We continue to believe that the pending Level 3 merger will be a positive for CenturyLink as it should help stabilize the company's EBITDA, revenue, and free cash flow trajectory.	BoA	8/3/17
All	Guidance and Forecasts	We have slightly raised our revenue estimates for the year while our EBITDA estimate remains at \$5.92b as part of the expected increase in revenue is related to low margin product sales	BoA	8/3/17
All	Guidance and Forecasts	A meet/meet quarter with potential growth in 3Q	BoA	8/3/17
All	Guidance and Forecasts	CenturyLink reported an in-line quarter and its 3Q guidance put the Street in the middle of the range. After adjusting 2Q revenue for 1 month of the data centers, however, the midpoint of the 3Q revenue guide implies revenue growth. Assuming that 4Q revenues are flat from 3Q, we expect that EBITDA will increase as the company typically reduces expenses in 4Q.	BoA	8/3/17

EXHIBIT 16B

2017 Q2 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
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Notes:

[1] Analyst reports were selected from the top four or five brokers and investment banks who most consistently issued reports on CenturyLink. The reports immediately following each earnings release were selected

[2] Bolded Text indicates that the entry was the heading of a section within the analyst report.

EXHIBIT 17A
EARNINGS RELEASE DATA - 2017, Q4

PR Section	Segment	Metric	Period	Value	Units	Trend	Quote
G	All	Free Cash Flow after Dividends	A	850 - 1,050	\$M		Anticipate 2018 Free Cash Flow after Dividends of \$850 million to \$1.05 billion
B	All	Total Rev.	Q	5.323	\$B	up	Consolidated total revenue was \$5.323 billion for fourth quarter 2017, compared to \$4.289 billion for fourth quarter 2016 and \$17.66 billion for full year 2017 compared to \$17.47 billion for full year 2016.
			A	17.66	\$B	up	
B	All	Consolidated Diluted EPS	Q	1.26	\$	up	Consolidated diluted earnings per share was \$1.26 for fourth quarter 2017, compared to diluted earnings per share of \$0.08 for fourth quarter 2016.
B	All	Diluted EPS	Q	0.18	\$		Excluding special items in fourth quarter 2017, the diluted earnings per share was \$0.18.
B	All	Tax Benefit Acquisition and Integration-Related Expenses	Q	1.1 222	\$B \$M		Fourth quarter special items included a recognized tax benefit of \$1.1 billion from the enactment of the Tax Cuts and Jobs Act, along with \$222 million of acquisition and integration-related expenses.
G	All	Annualized Run Rate Cash Savings	A	975	\$M		"We are focused on the successful integration of our businesses and improving our customer experience through simplification and automation while achieving our targeted \$975 million in annualized run rate cash savings," Post concluded.
B	Standalone	Core Rev.	Q	3.538	\$B	down	Core revenues were \$3.538 billion for fourth quarter 2017, declining 8.4% compared to fourth quarter 2016, primarily due to the decline in legacy revenues, as well as the approximate \$150 million revenue reduction due to the May 1, 2017 sale of the legacy CenturyLink data centers and colocation business (Colocation Sale).

EXHIBIT 17A
EARNINGS RELEASE DATA - 2017, Q4

PR							
Section	Segment	Metric	Period	Value	Units	Trend	Quote
B	Standalone	Adj. EBITDA	Q	1.471	\$B	down	Adjusted EBITDA, excluding special items, decreased to \$1.471 billion from \$1.585 billion in fourth quarter 2016 primarily due to the decline in higher margin legacy revenues, along with the margin impact related to the Colocation Sale.
B	All	Cash Equivalents and Marketable Securities	A	551	\$M		As of December 31, 2017, CenturyLink had cash, cash equivalents and marketable securities of \$551 million.
B	All	Annualized Adjusted EBITDA Synergies	Q	75	\$M		During fourth quarter 2017, CenturyLink achieved approximately \$75 million of annualized Adjusted EBITDA synergies.
B	All	Integration- Related Expenses	Q	62	\$M		Integration-related expenses for fourth quarter 2017 were \$62 million. In total, CenturyLink has incurred approximately \$170 million in integration-related expenses.
			A	170			
G	All	Adj. EBITDA	A	8.75 - 8.95	\$B		
G	All	Free Cash Flow	A	3.15 - 3.35	\$B		
G	All	Dividends	A	2.3	\$B		
G	All	Free Cash Flow after Dividends	A	850 - 1,050	\$M		
G	All	GAAP Interest Expense	A	2.25	\$B		
G	All	Cash Interest	A	2.1	\$B		
G	All	Capital Expend.	A	~16	percent of revenue		

EXHIBIT 17A
EARNINGS RELEASE DATA - 2017, Q4

PR							
Section	Segment	Metric	Period	Value	Units	Trend	Quote
G	All	Depreciation and Amortization	A	5.40 - 5.50	\$B		
G	All	Non-cash Compensation Expense	A	200	\$M		
G	All	Cash Income Taxes	A	100	\$M		
G	All	Full Year Effective Income Tax Rate	A	~25	percent		
Number of Reported Values:				25	Trend:	3 Up 2 Down	

EXHIBIT 17B**2017 Q4 Earnings Release Analyst Reports Major Themes*****Major Themes***

- CTL standalone revenue came in below estimates, while EBITDA was in line or above. Morgan Stanley described the results as messy but enough to de-risk CTL stock in the near term. (4/5)
- Free Cash Flow guidance from management is higher than analyst estimates, while EBITDA guidance is at or slightly above estimates. (5/5)
- Analysts generally viewed the merger with Level 3 positively. J.P. Morgan noted that the deal increases confidence in the value of CTL due to a higher enterprise mix, increased scale, revenue and EBITDA stability, tax protection and help with dividend payments. (4/5)
- Only one of the reports reviewed, that by JP Morgan, mentioned the lawsuit stating that the impacts could be greater than expected. (1/5)

Category 1	Category2	Quotations	Report	Date
All	Mergers & Acquisitions	As expected, 4Q results were messy given the mid-quarter acquisition of LVLT.	Jffrs	2/15/18
All	Revenue, Margins, and Profits	Excluding 1x items, results were generally in-line, as was the guidance.	Jffrs	2/15/18
All	Guidance and Forecasts	Nevertheless, we expect shares to react positively as we sensed considerable apprehension ahead of the guide.	Jffrs	2/15/18
All	Guidance and Forecasts	Despite meeting our expectations, we walk away slightly more positive given greater confidence in the guide than in prior years, though the margin of error remains thin amid a	Jffrs	2/15/18
All	Revenue, Margins, and Profits	Mixed Revenue Results; Profitability Largely In-Line.	Jffrs	2/15/18
All	Revenue, Margins, and Profits	Pro forma revenue of \$6.00bn was narrowly above our \$5.97bn estimate, with legacy LVLT revenue of \$2.11bn far outpacing our expectations while standalone CTL fell short.	Jffrs	2/15/18

EXHIBIT 17B**2017 Q4 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
All	Revenue, Margins, and Profits	At CTL, the majority of the miss was low-margin data integration, though Strategic and Legacy Services both came in below.	Jffrs	2/15/18
All	Subscribers	Broadband net losses were 105k, driven by continued high churn within the lower-speed base; we expect such pressures to continue.	Jffrs	2/15/18
All	Revenue, Margins, and Profits	Pro forma EBITDA of \$2.21bn was generally in-line with our expectations.	Jffrs	2/15/18
All	Guidance and Forecasts	Working Cap Benefits Boost Near-Term FCF Outlook.	Jffrs	2/15/18
All	Guidance and Forecasts	The headline FCF guidance of \$3.15-3.35bn was far better than the \$2.7-2.8bn range many were expecting. However, the outlook included \$500mn, or more, of non-recurring benefits, predominantly tied to a sizable tax refund and the timing of incentive payments at Level 3. Excluding such benefits, the outlook was generally in-line at around \$2.7bn.	Jffrs	2/15/18
All	Guidance and Forecasts	Satisfying Revenue and EBITDA Guide.	Jffrs	2/15/18
All	Guidance and Forecasts	The \$8.75-8.95bn outlook for adjusted EBITDA likely proved better than expected and investor confidence in the guide is apt to be higher than in recent years given the management change. The outlook implies EBITDA growth of 1.7% at the midpoint, driven predominantly by synergy realization.	Jffrs	2/15/18
All	Guidance and Forecasts	Backing into a revenue guide (based on capex and capital intensity) implies a narrow revenue decline of 0.3%, though we take a more conservative view.	Jffrs	2/15/18
All	Other	Valuation/Risks	Jffrs	2/15/18
All	Other	Key risks are cable competition, Business revenue acceleration, and integration.	Jffrs	2/15/18
All	Revenue, Margins, and Profits	Guide on EBITDA and FCF In-Line When Normalized; Dividend Sustained	JPM	2/15/18
All	Revenue, Margins, and Profits	Level3 reported better revenue even normalized for one-timers, and CenturyLink reported weaker than modeled revenue.	JPM	2/15/18

EXHIBIT 17B

2017 Q4 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Revenue, Margins, and Profits	With Level3 management playing a big role in integration, we expect that revenue trends may be challenged in the near term as the company cuts out low-margin revenue.	JPM	2/15/18
All	Revenue, Margins, and Profits	CenturyLink maintained the current \$2.16 dividend which implies a 12.3% yield at today's levels, and management again emphasized its commitment to continuing to pay it.	JPM	2/15/18
All	Guidance and Forecasts	Guidance in-line once adjusted, likely more conservative than CTL's history.	JPM	2/15/18
All	Revenue, Margins, and Profits	EBITDA is above our prior \$8.683b estimate, but includes an add-back of non-cash comp which follows the historical LVLTL convention rather than the CTL convention which we had modeled to. Backing out ~\$200m of noncash comp puts our EBITDA toward the high-end of guidance and we now estimate \$8.85 billion as well as \$2.10b in 1Q18.	JPM	2/15/18
All	Guidance and Forecasts	FCF guide of \$3.25b at the midpoint compares to our prior \$2.9b estimate, but benefits from ~\$500m of one-time working capital adjustments including timing of bonus payments around the deal and tax refunds.	JPM	2/15/18
All	Guidance and Forecasts	Beyond 2018 the company expects WC to be a small drag on cash flow rather than a benefit, but we are happy to see the inflow offset some heavy integration costs this year. The company reiterated 16% capital intensity and ~\$100m of cash taxes annually for the next 4-5 years, after which cash should be similar to GAAP around 24%.	JPM	2/15/18
All	Mergers & Acquisitions	The consolidated company offers potential for slowing revenue declines and EBITDA growth for dividend sustainability.	JPM	2/15/18
All	Mergers & Acquisitions	Our updated model estimates revenue declines of -1.8% in 2018. However, we expect steady EBITDA improvements as synergies and operating expense reductions are realized.	JPM	2/15/18
All	Mergers & Acquisitions	The company also discussed an expectation of margins >40% over time from 36.8% in Q417. With LVLTL Jeff Storey now COO and eventually CEO of the combined company we are now more confident of the company's ability to execute against its EBITDA targets, though we would not be surprised to see revenue somewhat lower if Storey and CFO Sunit Patel chose to pare back on some of the low or no-margin revenue efforts of CTL, like equipment sales which were already down 13% y/y and made new multi-year lows.	JPM	2/15/18

EXHIBIT 17B

2017 Q4 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
Business	Mergers & Acquisitions	75% of the business is enterprise, which we believe is a better underlying business than CTL's trends would suggest and the more focused management team should be able to effect improvements.	JPM	2/15/18
All	Revenue, Margins, and Profits	Pro forma revenue better.	JPM	2/15/18
All	Revenue, Margins, and Profits	PF CenturyLink revenue of \$6.005b was above our estimates of \$5.9366, and EBITDA of \$2.211b was below our \$2.076b estimate.	JPM	2/15/18
All	Mergers & Acquisitions	Legacy LVLT beats on CNS-NA and EMEA.	JPM	2/15/18
All	Revenue, Margins, and Profits	CTL 4Q17 revenue misses on better strategic growth but weaker Legacy revenues; subscriber numbers weaker.	JPM	2/15/18
All	Revenue, Margins, and Profits	Standalone CenturyLink total revenue for 4Q was \$3.964b vs. our \$3.977b estimate. HSI sub losses of 105k were worse than our -75k as <20 Mbps households continue to churn and access line declines accelerated to -7.3% y/y.	JPM	2/15/18
All	Guidance and Forecasts	Investment Thesis	JPM	2/15/18
All	Guidance and Forecasts	We now have more confidence in the value of CTL due to the positive implications of the Level 3 deal. We believe the Level 3 deal is a significant positive for CTL as it brings a higher enterprise mix (~75% of pro forma revenue), increased scale, revenue and EBITDA stability, and tax protection to help CTL pay its dividend.	JPM	2/15/18
All	Guidance and Forecasts	Valuation	JPM	2/15/18
	Guidance and Forecasts	Our pro-forma price target for CenturyLink is \$26. We reached our price target by our DCF analysis, which assumes a 0.5% terminal growth rate and 7.0% discount rate.	JPM	2/15/18
All	Guidance and Forecasts	Further deterioration in economic fundamentals could impact revenue to the downside	JPM	2/15/18

EXHIBIT 17B**2017 Q4 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
All	Guidance and Forecasts	Further deterioration in economic fundamentals at the consumer or enterprise levels poses risk to access line and revenue trends as consumer markets could deteriorate from already high levels and the expected recovery in business markets could be pushed further out. This would also make it harder to gain traction with CenturyLink's video and broadband revenue growth initiatives.	JPM	2/15/18
Consumer	Guidance and Forecasts	Competitive pressures in consumer could pose challenges	JPM	2/15/18
Consumer	Guidance and Forecasts	Consumer voice, broadband, and video comprise under 25% after the Level 3 deal – much of this is in urban and relatively competitive markets. CenturyLink has struggled competitively in those markets thus far, and the company may face challenges in improving operating metrics in these properties given the high level of competition from cable and CLEC operators.	JPM	2/15/18
All	Mergers & Acquisitions	Level 3 integration could be more difficult than expected	JPM	2/15/18
All	Mergers & Acquisitions	While Level 3 has a solid record of integrating acquisitions, CenturyLink has struggled with its recent enterprise operations and in integrating acquisitions. With CenturyLink managing and controlling the combined entity, synergies and revenue stability could take longer to materialize than we expect.	JPM	2/15/18
All	Lawsuit	Class-action lawsuits impacts may be greater than expected	JPM	2/15/18
All	Lawsuit	A lawsuit filed in June stemmed a flurry of class-action lawsuits in several states alleging that sales agents billed customers higher amounts than quoted prices for internet and cable television service. While we view the case to be similar to other cramming cases, claims are as high as \$12b. If the investigation proves that the cramming cases are more serious than expected, we could see damage to the company resulting from large settlement fees and reputational impacts. Depending on the severity, the merger with Level 3 could be compromised.	JPM	2/15/18
All	Other	Incumbents become more aggressive and focused on their wireline customers	JPM	2/15/18

EXHIBIT 17B**2017 Q4 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
Business	Other	The two dominant incumbents in the U.S. Enterprise communications space, AT&T and Verizon, while not entirely neglecting their wireline business, for years have devoted more time and management attention to their wireless businesses. Lately, however, that has started to change with both carriers, especially AT&T, putting more resources into their wireline enterprise efforts. So far it does not seem like that has stemmed the losses to competitive carriers, but over time CenturyLink could have a tougher time gaining market share from them. The same would apply to the incumbents in Europe and Latin America.	JPM	2/15/18
All	Revenue, Margins, and Profits	CTL beat on EBITDA, 4Q core revenue in-line	BoA	2/14/18
All	Revenue, Margins, and Profits	Standalone CTL revenue of \$3.96b was in-line with our \$3.99bn and slightly below the Street at \$4.02b. Adjusted EBITDA was \$1.47b, above us at \$1.43b and the Street at \$1.45b.	BoA	2/14/18
All	Revenue, Margins, and Profits	Standalone CTL spent \$528m vs. our capex estimate at \$718m and the Street at \$695m.	BoA	2/14/18
All	Mergers & Acquisitions	LVLTL revenue and EBITDA above expectations	BoA	2/14/18
All	Guidance and Forecasts	FY18 guidance for combined CTL brackets Street	BoA	2/14/18
All	Guidance and Forecasts	CTL provide 2018 guidance for the combined company. EBITDA is expected to rise to between \$8.75b to \$8.95b, in-line with our \$8.97b estimate and the Street at \$8.91b.	BoA	2/14/18
All	Guidance and Forecasts	FY18 FCF easily supports dividend payout	BoA	2/14/18
All	Guidance and Forecasts	Free cash flow is expected to rise to between \$3.15b-\$3.35b, well ahead of our \$2.65b estimate and the Street's \$2.68b. Compared to a \$2.3b annual dividend, the FCF at midpoint implies a payout ratio of 71%. We will look to the call for factors contributing to the very strong cash flow guide.	BoA	2/14/18
All	Mergers & Acquisitions	Maintain Buy on transformative deal	BoA	2/14/18

EXHIBIT 17B**2017 Q4 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
All	Mergers & Acquisitions	We continue to believe the Level 3 merger is a positive for CenturyLink as it helps stabilize the company's EBITDA, revenue, and free cash flow trajectory. Combined, LVLTL and CTL have consolidated a national/global enterprise services market from 4 to 3, which will lead to great share opportunities and rationalized pricing.	BoA	2/14/18
All	Guidance and Forecasts	Price objective basis & risk	BoA	2/14/18
All	Guidance and Forecasts	Our PO of \$27 implies a FCF multiple of 10.8x on our 18E FCF estimate. This is in-line with the stock's historical average but implies a discount to its peers trading at an average of 12x to account for merger integration risks, business concentration and higher leverage.	BoA	2/14/18
All	Guidance and Forecasts	Risks to our PO are increased competition from wireless, cable, and enterprise service providers and LVLTL deal integration	BoA	2/14/18
All	Other	Lots of moving parts, but 4Q17 results + 2018 guidance enough to de-risk stock near term	MS	2/15/18
All	Other	CenturyLink's 4Q17 results and 2018 guidance were messy, but overall, we think enough to provide a relief rally in the near term.	MS	2/15/18
All	Revenue, Margins, and Profits	Including a full three months of Level 3, adj. EBITDA was \$2,157m (\$2,211m excluding SBC) vs MSe \$2,185m. Adj. EBITDA had a one-time \$20m benefit from credits, which would increase the miss to 2.2% vs MSe. Reported revenue (reflecting a partial quarter of Level 3) was more in-line (\$5,323m vs MS \$5,336m) driven by better performance at Level 3, though there was another one-time benefit from low margin professional service revenue.	MS	2/15/18
All	Guidance and Forecasts	On guidance, 2018 adj. EBITDA was ahead of MSe/consensus, but below after adjusting for SBC. Finally, FCF guidance was well ahead of MSe (\$3.25b at midpoint, vs MSe \$2.83m) but there is a \$500m+ benefit from, in order of magnitude: 1) a tax refund, 2) early timing of incentive based compensation expense, and 3) tighter account receivables/payables management.	MS	2/15/18
All	Guidance and Forecasts	Even though these items will not repeat beyond 2018, they provide a real cash tailwind to support CenturyLink during its integration transition year. Management reiterated confidence in the dividend payout, prospects for significant margin expansion north of 40% over time and steady deleveraging into the 3-4x range helped by recent tax reform.	MS	2/15/18

EXHIBIT 17B**2017 Q4 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
All	Revenue, Margins, and Profits	Legacy CenturyLink	MS	2/15/18
All	Revenue, Margins, and Profits	Legacy CenturyLink revenue was \$62m below MSe, with the miss coming mostly coming from non-core revenue (-\$28m vs MSe) and legacy revenue (-\$25m vs MSe). On the strategic side, high bandwidth service revenue grew \$6m Q/Q, but was still \$8m below our estimate.	MS	2/15/18
Consumer	Revenue, Margins, and Profits	On the positive side, consumer broadband revenue grew \$15m Q/Q, despite 105k broadband sub losses in 4Q17 and 283k sub losses in 2017. This demonstrates CenturyLink's focus on retaining higher ARPU / lifetime customers, and de-emphasizing lower ARPU subs. In fact, CenturyLink gained a net 50k subs taking over 20 Mbps.	MS	2/15/18
All	Revenue, Margins, and Profits	CenturyLink's adj. EBITDA increased \$74m Q/Q to \$1,471m driven by seasonal cost cutting and the aforementioned \$20m one time benefit from credits.	MS	2/15/18
All	Mergers & Acquisitions	Synergies	MS	2/15/18
All	Mergers & Acquisitions	As expected, CenturyLink did not raise its synergy outlook.	MS	2/15/18
All	Revenue, Margins, and Profits	New Reporting	MS	2/15/18
All, Business, Consumer	Revenue, Margins, and Profits	Pro forma revenue is 74% business, 23% consumer, and 3% regulatory. By service type, the biggest components include transports and infrastructure (35%), IP and data services (31%), and voice and collaboration (29%)	MS	2/15/18
All	Guidance and Forecasts	CTL.N	MS	2/15/18
All	Guidance and Forecasts	Risks to achieving price target: LVLt integration challenges; Cable competition (90%+ overlap); Macro pressure on enterprise revenue; Cloud price cuts from Amazon, Google, and Microsoft; Margin pressure from revenue mix shift; Increased Regulatory Pressure; Pension/OPEB obligations.	MS	2/15/18
All	Mergers & Acquisitions	Event	Mcq	2/14/18

EXHIBIT 17B

2017 Q4 Earnings Release Analyst Reports Major Themes

Category 1	Category2	Quotations	Report	Date
All	Mergers & Acquisitions	In its first quarter as a combined company, CenturyLink-Level 3 demonstrated signs of operational turnaround, glimmers of growth, and confidence in its outlook. Integration is on the way and the focus on US\$975m of synergies is clear.	Mcq	2/14/18
Consumer	Other	However, the consumer business still faces stiff competition while growth in lowband/ legacy is stale.	Mcq	2/14/18
All	Revenue, Margins, and Profits	Impact: <u>Five new segments: Consumer, SME, Strategic Enterprise, Int'l & Global, and Wholesale & Indirect</u>	Mcq	2/14/18
All	Revenue, Margins, and Profits	Though there was a lull in '17 enterprise demand, '18 activity is picking up. Consistent with the 2% growth AT&T reported in Enterprise Solutions, CenturyLink was up ~6.0%.	Mcq	2/14/18
Business	Taxes	Tax reform freeing up customer budgets combined with efforts to better segment clients and a greater focus/investment in its enterprise business should help top-line growth.	Mcq	2/14/18
All	Guidance and Forecasts	However, 1Q EBITDA is expected to dip from 4Q primarily due to US\$20m in one-time credits and an increase in payroll/other compensation expense of US\$40m.	Mcq	2/14/18
Consumer	Subscribers	On the consumer side, Price for Life and upgrading speeds to 100Mbps-1Gbps is bearing fruit. The company lost 140k in the low end but added 50k on the high end. However, we continue to model net add losses as a result of competitive pressures from cable.	Mcq	2/14/18
All	Mergers & Acquisitions	Impact: [...] <u>With synergies and a better portfolio mix, margins could expand to ~40%</u>	Mcq	2/14/18
All	Mergers & Acquisitions	Integration costs of US\$170m+ will tackle people, organization, platforms, go-to market strategy, products, and an all-digital customer experience. Sales force integration is off to a quick start with employees already well aware of commission plans and the customers/segments they cover.	Mcq	2/14/18
All	Guidance and Forecasts	Impact: [...] <u>FCF growth is likely underway now with minimal cash taxes for 5+ years and improved dividend coverage</u>	Mcq	2/14/18
All	Guidance and Forecasts	We model 1Q/'18 FCF of US\$1.1bn/US\$3.3bn and capex of US\$1.0bn/US\$3.9bn, in line with guidance. 4Q leverage came in at ~4.3x vs its 3.0-4.0x target; we model '18 leverage of 4.1x. Post '18, CTL expects to return cash to shareholders through a ~70% dividend coverage ratio, delevering, and potentially buybacks.	Mcq	2/14/18

EXHIBIT 17B**2017 Q4 Earnings Release Analyst Reports Major Themes**

Category 1	Category2	Quotations	Report	Date
All	Revenue, Margins, and Profits	Earnings and target price revision	Mcq	2/14/18
All	Guidance and Forecasts	Price catalyst	Mcq	2/14/18
All	Guidance and Forecasts	Catalyst: integration, strategic services, sub trends	Mcq	2/14/18
All	Guidance and Forecasts	Action and recommendation	Mcq	2/14/18
All	Guidance and Forecasts	We are optimistic on '18 execution and expect this will dictate CenturyLink's strategy going forward.	Mcq	2/14/18

Notes:

[1] Analyst reports were selected from the top four or five brokers and investment banks who most consistently issued reports on CenturyLink. The reports immediately following each earnings release were selected

[2] Bolded Text indicates that the entry was the heading of a section within the analyst report.

EXHIBIT 18A
ABNORMAL RETURNS FOLLOWING ALLEGED FALSE AND MISLEADING REVENUE-RELATED STATEMENTS

	Announcement Date	Abnormal Return Measurement Date	Announcement Type	Volume	Price	CTL Return	Market Return	Industry Return	Predicted Return	Deal Model Abnormal Return	<i>t</i> -Statistic	<i>p</i> -Value	Deal Model Abnormal Price Move	Hartmark Abnormal Return	Hartmark Model Abnormal Price Move	Abnormal Return: Hartmark less Deal	Abnormal Price Move: Hartmark less Deal
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P] = [J]-[N]	[Q] = [M]-[O]
[1]	1-Mar-2013	1-Mar-2013	10-K	6,545,795	\$34.89	0.6%	0.2%	(0.4%)	(0.5%)	1.1%	0.51	0.61	\$0.39	0.4%	\$0.14	(0.7%)	(\$0.24)
[2]	8-May-2013	9-May-2013	Earnings Announcement	8,874,180	\$37.24	(0.2%)	(0.3%)	(0.6%)	(1.1%)	0.9%	0.44	0.66	\$0.35	0.4%	\$0.15	(0.5%)	(\$0.20)
[3]	10-May-2013	10-May-2013	10-Q	4,113,664	\$37.62	1.0%	0.4%	0.6%	1.0%	0.0%	0.01	0.99	\$0.01	0.6%	\$0.24	0.6%	\$0.23
[4]	7-Aug-2013	8-Aug-2013	Earnings Announcement	16,527,825	\$34.36	(5.6%)	0.4%	(0.5%)	0.2%	(5.8%)	(7.09)	0.00	(\$2.11)	(5.3%)	(\$1.94)	0.5%	\$0.17
[5]	8-Aug-2013	9-Aug-2013	10-Q	8,025,526	\$33.89	(1.4%)	(0.3%)	0.1%	(0.2%)	(1.1%)	(1.20)	0.23	(\$0.39)	(0.7%)	(\$0.23)	0.5%	\$0.16
[6]	6-Nov-2013	7-Nov-2013	Earnings Announcement	13,537,330	\$31.81	(6.1%)	(1.3%)	(0.7%)	(1.4%)	(4.7%)	(4.66)	0.00	(\$1.60)	(4.6%)	(\$1.56)	0.1%	\$0.04
[7]	7-Nov-2013*	8-Nov-2013	10-Q	10,077,843	\$31.33	(1.5%)	1.3%	(0.6%)	0.8%	(2.3%)	(2.11)	0.04	(\$0.74)	(1.9%)	(\$0.60)	0.4%	\$0.14
[8]	10-Dec-2013	10-Dec-2013	Investor Conference	6,332,872	\$31.51	(0.0%)	(0.3%)	(0.6%)	(0.7%)	0.7%	0.63	0.53	\$0.21	0.7%	\$0.21	(0.0%)	(\$0.00)
[9]	12-Feb-2014	13-Feb-2014	Earnings Announcement	12,193,083	\$30.77	1.9%	0.6%	1.0%	0.9%	1.0%	1.02	0.31	\$0.31	1.2%	\$0.37	0.2%	\$0.05
[10]	27-Feb-2014	27-Feb-2014	10-K	6,072,859	\$31.08	0.9%	0.5%	1.1%	0.8%	0.1%	0.07	0.94	\$0.02	(0.0%)	(\$0.01)	(0.1%)	(\$0.04)
[11]	7-May-2014	8-May-2014	Earnings Announcement	21,617,627	\$36.86	6.4%	(0.1%)	0.4%	0.0%	6.3%	7.86	0.00	\$2.20	6.0%	\$2.08	(0.3%)	(\$0.11)
[12]	8-May-2014*	9-May-2014	10-Q	7,794,610	\$36.56	(0.8%)	0.2%	0.9%	0.4%	(1.2%)	(1.19)	0.24	(\$0.44)	(1.0%)	(\$0.37)	0.2%	\$0.07
[13]	12-Jun-2014	12-Jun-2014	Investor Conference	2,960,166	\$36.39	(0.1%)	(0.7%)	0.0%	(0.3%)	0.2%	0.16	0.87	\$0.06	0.2%	\$0.08	0.0%	\$0.02
[14]	6-Aug-2014	7-Aug-2014	Earnings Announcement	4,882,082	\$38.95	0.5%	(0.5%)	(0.4%)	(0.1%)	0.6%	0.59	0.55	\$0.24	0.9%	\$0.35	0.3%	\$0.11
	7-Aug-2014	7-Aug-2014	10-Q														
[15]	5-Nov-2014	6-Nov-2014	Earnings Announcement	8,155,493	\$39.00	(6.4%)	0.4%	(1.4%)	(0.5%)	(5.8%)	(6.45)	0.00	(\$2.42)	(5.9%)	(\$2.46)	(0.1%)	(\$0.03)
[16]	6-Nov-2014	7-Nov-2014	10-Q	6,073,176	\$39.43	1.1%	0.1%	0.9%	0.7%	0.4%	0.34	0.73	\$0.14	0.2%	\$0.08	(0.2%)	(\$0.06)
[17]	11-Feb-2015	12-Feb-2015	Earnings Announcement	12,709,861	\$39.29	(3.0%)	1.0%	(0.1%)	0.6%	(3.7%)	(3.47)	0.00	(\$1.49)	(3.5%)	(\$1.40)	0.2%	\$0.08
[18]	24-Feb-2015	25-Feb-2015	10-K	3,045,561	\$37.30	0.6%	(0.1%)	1.3%	1.0%	(0.4%)	(0.29)	0.77	(\$0.13)	0.5%	\$0.20	0.9%	\$0.33
[19]	9-Mar-2015	9-Mar-2015	Investor Conference	3,639,731	\$35.23	(0.5%)	0.4%	(0.1%)	0.1%	(0.7%)	(0.59)	0.56	(\$0.24)	(0.5%)	(\$0.17)	0.2%	\$0.07
[20]	5-May-2015	6-May-2015	Earnings Announcement	9,386,969	\$34.53	(2.8%)	(0.4%)	(0.9%)	(1.1%)	(1.7%)	(1.46)	0.15	(\$0.59)	(1.9%)	(\$0.69)	(0.3%)	(\$0.09)
[21]	6-May-2015	7-May-2015	10-Q	3,863,268	\$34.65	0.3%	0.4%	(0.9%)	(0.6%)	1.0%	0.85	0.39	\$0.34	0.3%	\$0.10	(0.7%)	(\$0.24)
[22]	5-Aug-2015	6-Aug-2015	Earnings Announcement	13,508,550	\$27.93	(2.2%)	(0.7%)	0.5%	(0.5%)	(1.7%)	(1.43)	0.16	(\$0.49)	(1.4%)	(\$0.41)	0.3%	\$0.07
	6-Aug-2015	6-Aug-2015	10-Q														
[23]	4-Nov-2015	5-Nov-2015	Earnings Announcement	7,444,523	\$28.71	2.5%	(0.1%)	(0.7%)	(0.7%)	3.1%	2.73	0.01	\$0.88	2.8%	\$0.78	(0.3%)	(\$0.09)
[24]	5-Nov-2015	6-Nov-2015	10-Q	5,289,408	\$28.57	(0.5%)	(0.0%)	0.1%	(0.1%)	(0.4%)	(0.36)	0.72	(\$0.12)	0.2%	\$0.06	0.6%	\$0.18
[25]	7-Dec-2015	7-Dec-2015	Investor Conference	5,394,426	\$27.13	1.6%	(0.7%)	0.1%	(0.8%)	2.4%	1.98	0.05	\$0.64	1.7%	\$0.44	(0.7%)	(\$0.20)
[26]	10-Feb-2016	11-Feb-2016	Earnings Announcement	15,041,048	\$27.29	11.0%	(1.2%)	1.8%	0.3%	10.7%	8.44	0.00	\$2.62	12.4%	\$3.04	1.7%	\$0.42
[27]	24-Feb-2016*	25-Feb-2016	10-K	4,701,352	\$30.41	1.3%	1.2%	(0.5%)	0.8%	0.6%	0.36	0.72	\$0.17	0.3%	\$0.09	(0.3%)	(\$0.09)
[28]	4-May-2016	5-May-2016	Earnings Announcement	20,521,476	\$28.20	(8.9%)	0.0%	(1.9%)	(2.1%)	(6.8%)	(4.21)	0.00	(\$2.10)	(8.6%)	(\$2.65)	(1.8%)	(\$0.55)
	5-May-2016	5-May-2016	10-Q														
[29]	3-Aug-2016	4-Aug-2016	Earnings Announcement	8,008,621	\$30.25	(0.9%)	0.0%	(0.2%)	(0.1%)	(0.8%)	(0.59)	0.56	(\$0.23)	(0.8%)	(\$0.25)	(0.1%)	(\$0.02)
[30]	4-Aug-2016	5-Aug-2016	10-Q	4,790,409	\$29.88	(1.2%)	0.9%	(1.6%)	(0.1%)	(1.1%)	(0.83)	0.41	(\$0.33)	(1.8%)	(\$0.55)	(0.8%)	(\$0.23)
[31]	31-Oct-2016	31-Oct-2016	Earnings Announcement	71,943,608	\$26.58	(12.5%)	(0.0%)	0.2%	0.2%	(12.7%)	(9.82)	0.00	(\$3.86)	(12.9%)	(\$3.91)	(0.1%)	(\$0.04)
[32]	4-Nov-2016	4-Nov-2016	10-Q	21,633,402	\$23.05	0.2%	(0.2%)	1.4%	0.6%	(0.4%)	(0.21)	0.84	(\$0.09)	0.3%	\$0.07	0.7%	\$0.15
[33]	8-Feb-2017	9-Feb-2017	Earnings Announcement	10,179,851	\$24.42	(0.0%)	0.6%	0.1%	0.5%	(0.6%)	(0.30)	0.76	(\$0.14)	(0.6%)	(\$0.16)	(0.1%)	(\$0.02)
[34]	22-Feb-2017*	23-Feb-2017	10-K	6,597,988	\$24.71	(0.5%)	0.1%	(1.2%)	(1.1%)	0.6%	0.31	0.76	\$0.14	(1.0%)	(\$0.25)	(1.6%)	(\$0.39)
[35]	3-May-2017	4-May-2017	Earnings Call	28,643,399	\$23.74	(6.6%)	0.1%	(2.0%)	(1.4%)	(5.2%)	(5.37)	0.00	(\$1.33)	(6.2%)	(\$1.57)	(0.9%)	(\$0.23)
Total	38	35															

Certain rows show no data if the Abnormal Return Measurement Date is the same as in the row above.

EXHIBIT 18A
ABNORMAL RETURNS FOLLOWING ALLEGED FALSE AND MISLEADING REVENUE-RELATED STATEMENTS

Notes and Sources:

All regression results are based on the Deal Model as described in Exhibit 26B.

[A] Announcement Dates for SEC filings and earnings announcements are based on information from SEC EDGAR. Announcement dates for investor conferences are from the Complaint, Appendix A.

* For these events, the filing dates on SEC EDGAR differ from the dates listed in the Complaint, Appendix A. The table shows dates from SEC EDGAR.

[B] When announcements are made after close of market, the Abnormal Return Measurement Date is the trading day after the Announcement Date.

[C] From Complaint, Appendix A.

[D]-[G] From Bloomberg. [G] shows the daily returns on the market index, which is the S&P 500 Index.

[H] Excess industry returns are residuals from a regression of the daily returns DJSTEL index on the daily returns of the market index (S&P500). See Exhibit 26B.

[I] Predicted returns are from an estimation of the Deal Model as described in Exhibit 26B.

[J] = [F] - [H]. Difference of realized CTL return and predicted CTL return using Deal regression model.

[K] t -statistic from a test that the abnormal return is equal to zero against a two-sided alternative. Bolded values denote statistical significance at 5% level or less (t greater than about 1.96).

[L] p -value associated with t -test in [L].

[M] Deal Model abnormal return times previous day's closing price.

[N], [O] From Hartzmark Report, Appendix C.

EXHIBIT 18B
ABNORMAL RETURNS FOLLOWING ALLEGED FALSE AND MISLEADING NON-REVENUE-RELATED STATEMENTS

	Announcement Date	Abnormal Return Measurement Date	Announcement Type	Volume	Price	CTL Return	Market Return	Excess Industry Return	Predicted Return	Deal Model Abnormal Return	<i>t</i> -Statistic	<i>p</i> -Value	Deal Model Abnormal Price Move	Hartmark Abnormal Return	Hartmark Abnormal Price Move	Abnormal Return: Hartmark less Deal	Abnormal Price Move: Hartmark less Deal
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P] = [N]-[J]	[Q] = [O]-[M]
[1]	10-Apr-2013	10-Apr-2013	SEC Form DEF 14A	5,814,105	\$36.95	1.7%	1.2%	1.4%	2.6%	(0.9%)	(0.41)	0.69	(\$0.34)	0.6%	\$0.23	1.6%	\$0.56
[2]	16-Apr-2014	16-Apr-2014	SEC Form DEF 14A	4,915,918	\$34.74	2.0%	1.1%	0.2%	0.8%	1.2%	1.21	0.23	\$0.40	1.2%	\$0.42	0.1%	\$0.02
[3]	9-Mar-2015	9-Mar-2015	Investor Conference	3,639,731	\$35.23	(0.5%)	0.4%	(0.1%)	0.1%	(0.7%)	(0.59)	0.56	(\$0.24)	(0.5%)	(\$0.17)	0.2%	\$0.07
[4]	8-Apr-2015	8-Apr-2015	SEC Form DEF 14A	3,214,111	\$35.50	0.3%	0.3%	(0.5%)	(0.4%)	0.7%	0.57	0.57	\$0.24	(0.1%)	(\$0.02)	(0.7%)	(\$0.26)
[5]	4-Jun-2015	4-Jun-2015	Investor Conference	4,776,906	\$32.83	(0.5%)	(0.9%)	(0.1%)	(0.8%)	0.3%	0.30	0.76	\$0.11	0.4%	\$0.13	0.0%	\$0.01
[6]	24-Jun-2015	24-Jun-2015	Financial Analyst Day	11,369,663	\$31.88	(2.1%)	(0.7%)	(0.3%)	(0.8%)	(1.3%)	(1.11)	0.27	(\$0.41)	(1.4%)	(\$0.44)	(0.1%)	(\$0.04)
[7]	12-Aug-2015	12-Aug-2015	Oppenheimer Conference	5,320,177	\$28.53	1.0%	0.1%	(0.6%)	(0.5%)	1.5%	1.29	0.20	\$0.43	1.5%	\$0.43	0.0%	\$0.00
[8]	22-Sep-2015	22-Sep-2015	Response Letter to the SEC	5,241,863	\$25.38	(1.9%)	(1.2%)	(0.2%)	(1.6%)	(0.3%)	(0.28)	0.78	(\$0.08)	(0.5%)	(\$0.12)	(0.1%)	(\$0.03)
[9]	7-Mar-2016	7-Mar-2016	Investor Conference	5,096,593	\$31.77	0.6%	0.1%	0.5%	0.9%	(0.3%)	(0.19)	0.85	(\$0.10)	(0.2%)	(\$0.06)	0.1%	\$0.04
[10]	5-Apr-2016	6-Apr-2016	SEC Form DEF 14A	3,832,591	\$32.49	1.2%	1.1%	(0.7%)	0.5%	0.7%	0.43	0.67	\$0.22	0.7%	\$0.23	0.0%	\$0.01
[11]	6-Apr-2016	7-Apr-2016	AZ Assurance of Discontinuance	5,704,504	\$31.87	(1.9%)	(1.2%)	(0.1%)	(1.2%)	(0.8%)	(0.47)	0.64	(\$0.25)	0.1%	\$0.05	0.9%	\$0.29
[12]	21-Sep-2016	21-Sep-2016	Goldman Sachs Conference	4,296,810	\$26.92	0.6%	1.1%	(0.5%)	0.7%	(0.1%)	(0.07)	0.94	(\$0.02)	(0.8%)	(\$0.20)	(0.7%)	(\$0.18)
[13]	6-Oct-2016	6-Oct-2016	Statement to News Source	3,531,399	\$26.97	(0.2%)	0.1%	(0.7%)	(0.5%)	0.3%	0.25	0.80	\$0.08	(0.2%)	(\$0.04)	(0.5%)	(\$0.13)
[14]	18-Oct-2016	18-Oct-2016	Statement to News Source	3,770,437	\$27.90	1.9%	0.6%	0.0%	0.5%	1.4%	1.13	0.26	\$0.38	1.5%	\$0.40	0.1%	\$0.01
[15]	27-Jan-2017	30-Jan-2017	Statement to News Source	4,880,701	\$25.81	(0.6%)	(0.6%)	(0.1%)	(0.8%)	0.2%	0.10	0.92	\$0.05	(0.0%)	(\$0.01)	(0.2%)	(\$0.06)
[16]	1-Feb-2017	2-Feb-2017	Statement to News Source	6,190,566	\$25.26	(1.0%)	0.1%	(1.0%)	(0.9%)	(0.1%)	(0.04)	0.97	(\$0.02)	(0.3%)	(\$0.08)	(0.2%)	(\$0.06)
[17]	13-Apr-2017	13-Apr-2017	SEC Form DEF 14A	9,958,699	\$25.12	(0.1%)	(0.7%)	(0.0%)	(1.1%)	1.0%	0.55	0.58	\$0.26	1.0%	\$0.26	(0.0%)	(\$0.00)
[18]	25-May-2017	25-May-2017	Statement to News Source	5,796,190	\$24.93	(0.1%)	0.5%	(0.0%)	0.5%	(0.6%)	(0.53)	0.60	(\$0.14)	(0.8%)	(\$0.19)	(0.2%)	(\$0.04)

Notes and Sources:

- [1] See Exhibit 18A for variable definitions.
[2] Details on the specific statements and sources associated with each announcement listed in column [C] are in Exhibit 18C.

EXHIBIT 18C
LIST OF ALLEGED NON-REVENUE MISSTATEMENTS

	Date of Alleged Misstatement	Abnormal Return Measurement Date	Complaint Reference	Alleged Misstatement	Misrepresentation Category	Abnormal Return	Next Day Abnormal Return
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[1]	10-Apr-2013	10-Apr-2013	¶ 205, FN 9	"Helped mitigate legacy service declines: As part of its effort to 'mitigate' declines in its legacy services, the Company remained 'focused on efforts to ... promote long-term relationships with our customers through bundling of integrated services.'" [Footnote 9 cites the Definitive Proxy Statement on Form DEF 14A filed April 10, 2013]	1, 2	-0.9%	0.7%
[2]	16-Apr-2014	16-Apr-2014	¶ 205, FN 9	"Helped mitigate legacy service declines: As part of its effort to 'mitigate' declines in its legacy services, the Company remained 'focused on efforts to ... promote long-term relationships with our customers through bundling of integrated services.'" [Footnote 9 cites the Definitive Proxy Statement on Form DEF 14A filed April 16, 2014]	1, 2	1.2%	-1.3%
[3]	8-Apr-2015	8-Apr-2015	¶ 205, FN 9	"Helped mitigate legacy service declines: As part of its effort to 'mitigate' declines in its legacy services, the Company remained 'focused on efforts to ... promote long-term relationships with our customers through bundling of integrated services.'" [Footnote 9 cites the Definitive Proxy Statement on Form DEF 14A filed April 8, 2015]	1, 2	0.7%	1.5%
[4]	9-Mar-2015	9-Mar-2015	¶ 197	"...during investor conference calls on March 9, 2015, June 4, 2015 and March 7, 2016, Defendant Ewing stated '[w]e're committed to being the broadband leader in our markets, offering advanced broadband services that meet the needs of our customers.'" [Footnote 9 cites the Definitive Proxy Statement on Form DEF 14A filed April 8, 2015]	1	-0.7%	1.2%
[5]	4-Jun-2015	4-Jun-2015	¶ 197	"...during investor conference calls on March 9, 2015, June 4, 2015 and March 7, 2016, Defendant Ewing stated '[w]e're committed to being the broadband leader in our markets, offering advanced broadband services that meet the needs of our customers.'" [Footnote 9 cites the Definitive Proxy Statement on Form DEF 14A filed April 8, 2015]	1	0.3%	-1.7%
[6]	24-Jun-2015	24-Jun-2015	¶ 193	"Throughout the Class Period, Defendants repeatedly emphasized CenturyLink's purported strategy of selling services and growing subscribers by focusing on providing services that met its customers' 'needs,' and how this focus helped the Company to effectively compete with cable companies that were often able to offer cheaper prices for similar services. For example, on June 24, 2015, Defendant Post and CenturyLink CTO Aamir Hussain presented at the CenturyLink Inc. Financial Analyst Day. During the presentation, Post stated that CenturyLink was: '[F]ocus[ed] on our customers, their needs, the customer experience in all that we do. It really is about the customer.'" [Footnote 9 cites the Definitive Proxy Statement on Form DEF 14A filed April 8, 2015]	1, 2	-1.3%	-6.1%
[7]	12-Aug-2015	12-Aug-2015	¶ 216	"Similarly, at the Oppenheimer Technology, Internet & Communications Conference on August 12, 2015, in a response to a question about competing on price with cable providers, Defendant Ewing explained the changes CenturyLink had made to its "discount" pricing strategy and efforts to tighten credit requirements..." [Footnote 9 cites the Definitive Proxy Statement on Form DEF 14A filed April 8, 2015]	2, 3	1.5%	-1.8%
[8]	22-Sep-2015	22-Sep-2015	¶ 263	"...the Company's September 22, 2015 response letter attributing the consumer segment's performance to "price compression and customer disconnects caused by competition" – without disclosing the changes to the Company's sales practices and their impact on CenturyLink's revenues – was materially misleading..." [Footnote 9 cites the Definitive Proxy Statement on Form DEF 14A filed April 8, 2015]	2, 3, 5	-0.3%	-0.4%

EXHIBIT 18C
LIST OF ALLEGED NON-REVENUE MISSTATEMENTS

	Date of Alleged Misstatement	Abnormal Return Measurement Date	Complaint Reference	Alleged Misstatement	Misrepresentation Category	Abnormal Return	Next Day Abnormal Return
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[9]	7-Mar-2016	7-Mar-2016	¶ 197	"CenturyLink also represented that its business strategy for specific services was based on the Company 'meeting customer care needs...' during investor conference calls on March 9, 2015, June 4, 2015 and March 7, 2016, Defendant Ewing stated '[w]e're committed to being the broadband leader in our markets, offering advanced broadband services that meet the needs of our customers.'"	1, 2	-0.3%	-0.3%
[10]	5-Apr-2016	6-Apr-2016	¶205, FN 9	"Helped mitigate legacy service declines: As part of its effort to 'mitigate' declines in its legacy services, the Company remained 'focused on efforts to ... promote long-term relationships with our customers through bundling of integrated services.'" [Footnote 9 cites the Definitive Proxy Statement on Form DEF 14A filed April 5, 2016]	1, 2	0.7%	-0.8%
[11]	6-Apr-2016	7-Apr-2016	¶¶ 247–255	"As discussed above, on April 6, 2016, CenturyLink entered into a publicly-filed Assurance of Discontinuance with the Arizona Attorney General. In the Assurance of Discontinuance, the Arizona Attorney General explained each alleged violation of Arizona Consumer law it believed CenturyLink engaged in, and—for each allegation— CenturyLink “expressly deni[ed]” the allegation. In fact, not only did CenturyLink deny the Attorney General’s allegations of providing incomplete information, the Company affirmatively stated that it fully disclosed all such information to consumers...” [See ¶ 248-255 for details]	4	-0.8%	-0.2%
[12]	21-Sep-2016	21-Sep-2016	¶ 231	"...during a September 21, 2016 presentation at the Goldman Sachs Communicopia Conference, Defendant Post discussed the purported shift in strategy, and the supposed benefits that would provide in terms of more dependable cash flows: 'We have decided that we -- we were focused on quantity, driving more customers in. We've changed our approach there. We look at the propensity of the churn of those single service customers, look at their credit worthiness. A lot of them weren't paying, and the ARPU issue. We believe that we are stronger and better off going forward to focus on high-value customers, not what's pointed at the numbers, but get really strong customers that are going to drive value, stability going forward that are more loyal and pay their bills... So it's going to take some time to work through the base of that single service customer base, but we're seeing improvement already and we expect going into in 2017 we'll see even more.'"	2, 3	-0.1%	1.4%
[13]	6-Oct-2016	6-Oct-2016	¶242, FN 12	"...in response to an October 6, 2016 story published by a Seattle television station reporting on an investigation of CenturyLink by the Seattle Office of Cable Communications in connection with improper billing, the Company made the following statement: 'Some of our customers have experienced customer service and billing challenges. We take these concerns seriously and have implemented process and system improvements designed to resolve their concerns. We are working diligently to identify immediate changes...'"	1, 4	0.3%	3.5%
[14]	18-Oct-2016	18-Oct-2016	¶ 243, FN 13	"Similarly, when the Star Tribune reported [on October 18, 2016] that '[t]he Better Business Bureau of Minnesota ha[d] logged 1,150 complaints against CenturyLink in Minnesota since 2015, compared with 450 for Comcast, 300 for DirecTV and 170 for the Dish Network,' CenturyLink spokeswoman Molly Clemen said, 'We are committed to providing the best quality experience and will continue to work to meet and exceed our customers' expectations in our markets.'"	1, 4	1.4%	0.7%
[15]	27-Jan-2017	30-Jan-2017	¶245, FN 15	"For example, in response to a report published by a Denver, Colorado television station [on January 27, 2017], CenturyLink falsely represented that, '[a]s a customer-first business, we take any complaint seriously and work diligently to provide each customer with a fair and quick resolution...'"	1, 4	0.2%	0.3%

EXHIBIT 18C
LIST OF ALLEGED NON-REVENUE MISSTATEMENTS

	Date of Alleged Misstatement	Abnormal Return Measurement Date	Complaint Reference	Alleged Misstatement	Misrepresentation Category	Abnormal Return	Next Day Abnormal Return
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
[16]	1-Feb-2017	2-Feb-2017	¶244, FN 14	"[On February 1, 2017,] a Portland, Oregon news outlet reported on increasing complaints against the Company, noting that the Better Business Bureau had logged 11,954 complaints about CenturyLink in the prior three years... CenturyLink offered the following misleading response: 'CenturyLink strives to provide the best possible service at all times. As a customer-first business, we take any complaint seriously and work diligently to provide each customer with a fair and quick resolution...'"	1, 4	-0.1%	0.0%
[17]	13-Apr-2017	13-Apr-2017	¶205, FN 9	"Helped mitigate legacy service declines: As part of its effort to 'mitigate' declines in its legacy services, the Company remained 'focused on efforts to ... promote long-term relationships with our customers through bundling of integrated services.'" [Footnote 9 cites the Definitive Proxy Statement on Form DEF 14A filed April 13, 2017]	1, 2	1.0%	-0.5%
[18]	25-May-2017	25-May-2017	¶245, FN 16	"And in a news article [published on May 25, 2017] about 'dozens of [CenturyLink] cable subscribers who complained about billing nightmares and bait and switch sales tactics,' CenturyLink responded to allegations by again emphasizing its purported commitment to and focus on its customers, stating that 'CenturyLink values our customers and strives to provide the best possible experience and customer service at all times.... We are committed to providing the best quality experience and will continue to work to meet and exceed our customers' expectations.'"	1, 4	-0.6%	-0.4%

Notes and Sources:

- [E] Misrepresentation categories in [E] are based on ¶ 190 of the Complaint: "Throughout the Class Period, Defendants made numerous materially false and misleading statements and omissions, including those concerning: (1) the nature of the Company's "customer first" business strategy and, particularly, CenturyLink's purported strategy of providing products and services drivers of the revenues it reported from consumers according to customers' "needs" and its purported practice of "bundling" its products and services; (2) the reasons and factors driving the Company's financial performance, including the and small business customers, the impact of the Company's "bundling" marketing strategy, and the quality and demand for the Company's services; (3) the reasons behind CenturyLink's fluctuating financial results, which had been secretly impacted by the Company's quickly-aborted effort to address its deceptive sales practices cramming crisis; (4) CenturyLink's business conduct, particularly as it related to sales practices, business integrity, and ethical standards, as well as the Company's statements minimizing, and denying the Company's fraudulent billing practices in response to news reports that began to highlight them; and (5) CenturyLink's material omissions under Item 303."

EXHIBIT 18D
LISTING AND MAPPING OF ALLEGED INFLATIONARY DAYS TO CATEGORIES OF ALLEGED MISSTATEMENTS

Mapping to Categories of Alleged Misstatements										
Announcement Date	Abnormal Return Measurement Date	Revenue Misrepresentation in Complaint Appendix A	(1) "Customer First" Strategy, Customer Needs, Bundling	(2) Reasons and Factors Driving the Company's Financial Performance	(3) Reasons Behind Fluctuating Financial Results	(4) Business Conduct and Sales Practices	(5) Material Omissions Under Item 303 (Mgmt. Discussion of Financial Results)	Announcement Type	Abnormal Return	t-Statistic
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]
[1]	1-Mar-2013	1-Mar-2013	X					10-K	1.1%	0.51
[2]	10-Apr-2013	10-Apr-2013		X	X			SEC Form DEF 14A	(0.9%)	(0.41)
[3]	8-May-2013	9-May-2013	X					Earnings Announcement	0.9%	0.44
[4]	10-May-2013	10-May-2013	X					10-Q	0.0%	0.01
[5]	7-Aug-2013	8-Aug-2013	X					Earnings Announcement	(5.8%)	(7.09)
[6]	8-Aug-2013	9-Aug-2013	X					10-Q	(1.1%)	(1.20)
[7]	6-Nov-2013	7-Nov-2013	X					Earnings Announcement	(4.7%)	(4.66)
[8]	7-Nov-2013*	8-Nov-2013	X					10-Q	(2.3%)	(2.11)
[9]	10-Dec-2013	10-Dec-2013	X					Investor Conference	0.7%	0.63
[10]	12-Feb-2014	13-Feb-2014	X					Earnings Announcement	1.0%	1.02
[11]	27-Feb-2014	27-Feb-2014	X					10-K	0.1%	0.07
[12]	16-Apr-2014	16-Apr-2014		X	X			SEC Form DEF 14A	1.2%	1.21
[13]	7-May-2014	8-May-2014	X					Earnings Announcement	6.3%	7.86
[14]	8-May-2014*	9-May-2014	X					10-Q	(1.2%)	(1.19)
[15]	12-Jun-2014	12-Jun-2014	X					Investor Conference	0.2%	0.16
[16]	6-Aug-2014	7-Aug-2014	X					Earnings Announcement	0.6%	0.59
	7-Aug-2014	7-Aug-2014	X					10-Q	-	-
[17]	5-Nov-2014	6-Nov-2014	X					Earnings Announcement	(5.8%)	(6.45)
[18]	6-Nov-2014	7-Nov-2014	X					10-Q	0.4%	0.34
[19]	11-Feb-2015	12-Feb-2015	X					Earnings Announcement	(3.7%)	(3.47)
[20]	24-Feb-2015	25-Feb-2015	X					10-K	(0.4%)	(0.29)
[21]	9-Mar-2015	9-Mar-2015	X	X				Investor Conference	(0.7%)	(0.59)
[22]	8-Apr-2015	8-Apr-2015		X	X			SEC Form DEF 14A	0.7%	0.57
[23]	5-May-2015	6-May-2015	X					Earnings Announcement	(1.7%)	(1.46)
[24]	6-May-2015	7-May-2015	X					10-Q	1.0%	0.85
[25]	4-Jun-2015	4-Jun-2015		X				Investor Conference	0.3%	0.30
[26]	24-Jun-2015	24-Jun-2015		X	X			Financial Analyst Day	(1.3%)	(1.11)
[27]	5-Aug-2015	6-Aug-2015	X					Earnings Announcement	(1.7%)	(1.43)
	6-Aug-2015	6-Aug-2015	X					10-Q	-	-
[28]	12-Aug-2015	12-Aug-2015			X	X		Oppenheimer Conference	1.5%	1.29
[29]	22-Sep-2015	22-Sep-2015			X	X	X	Response Letter to the SEC	(0.3%)	(0.28)
[30]	4-Nov-2015	5-Nov-2015	X					Earnings Announcement	3.1%	2.73
[31]	5-Nov-2015	6-Nov-2015	X					10-Q	(0.4%)	(0.36)
[32]	7-Dec-2015	7-Dec-2015	X					Investor Conference	2.4%	1.98
[33]	10-Feb-2016	11-Feb-2016	X					Earnings Announcement	10.7%	8.44

EXHIBIT 18D
LISTING AND MAPPING OF ALLEGED INFLATIONARY DAYS TO CATEGORIES OF ALLEGED MISSTATEMENTS

Mapping to Categories of Alleged Misstatements										
Announcement Date	Abnormal Return Measurement Date	Revenue Misrepresentation in Complaint Appendix A	(1) "Customer First" Strategy, Customer Needs, Bundling	(2) Reasons and Factors Driving the Company's Financial Performance	(3) Reasons Behind Fluctuating Financial Results	(4) Business Conduct and Sales Practices	(5) Material Omissions Under Item 303 (Mgmt. Discussion of Financial Results)	Announcement Type	Abnormal Return	t-Statistic
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]
[34]	24-Feb-2016*	25-Feb-2016	X					10-K	0.6%	0.36
[35]	7-Mar-2016	7-Mar-2016		X	X			Investor Conference	(0.3%)	(0.19)
[36]	5-Apr-2016	6-Apr-2016		X	X			SEC Form DEF 14A	0.7%	0.43
[37]	6-Apr-2016	7-Apr-2016						AZ Assurance of Discontinuance	(0.8%)	(0.47)
[38]	4-May-2016	5-May-2016	X					Earnings Announcement	(6.8%)	(4.21)
	5-May-2016	5-May-2016	X					10-Q	-	-
[39]	3-Aug-2016	4-Aug-2016	X					Earnings Announcement	(0.8%)	(0.59)
[40]	4-Aug-2016	5-Aug-2016	X					10-Q	(1.1%)	(0.83)
[41]	21-Sep-2016	21-Sep-2016			X	X		Goldman Sachs Conference	(0.1%)	(0.07)
[42]	6-Oct-2016	6-Oct-2016		X				Statement to News Source	0.3%	0.25
[43]	18-Oct-2016	18-Oct-2016		X				Statement to News Source	1.4%	1.13
[44]	31-Oct-2016	31-Oct-2016	X					Earnings Announcement	(12.7%)	(9.82)
[45]	4-Nov-2016	4-Nov-2016	X					10-Q	(0.4%)	(0.21)
[46]	27-Jan-2017	30-Jan-2017		X				Statement to News Source	0.2%	0.10
[47]	1-Feb-2017	2-Feb-2017		X				Statement to News Source	(0.1%)	(0.04)
[48]	8-Feb-2017	9-Feb-2017	X					Earnings Announcement	(0.6%)	(0.30)
[49]	22-Feb-2017*	23-Feb-2017	X					10-K	0.6%	0.31
[50]	13-Apr-2017	13-Apr-2017		X	X			SEC Form DEF 14A	1.0%	0.55
[51]	3-May-2017	4-May-2017	X					Earnings Call	(5.2%)	(5.37)
[52]	25-May-2017	25-May-2017		X				Statement to News Source	(0.6%)	(0.53)
Total		38	14	10	3	6	1			

Notes and Sources:

* For these events, the filing dates on SEC EDGAR differ from the dates listed in the Complaint, Appendix A. The table shows dates from SEC EDGAR.

- [1] See Exhibit 18A for definitions of columns [A], [B], [I], [J] and [K].
 [2] "X" in column [C] indicates the announcement is a revenue-related disclosure from the Complaint, Appendix A
 [3] "X" in Columns [D] to [H] indicates the five categories of non-revenue disclosures described in Footnotes to Exhibit 18C

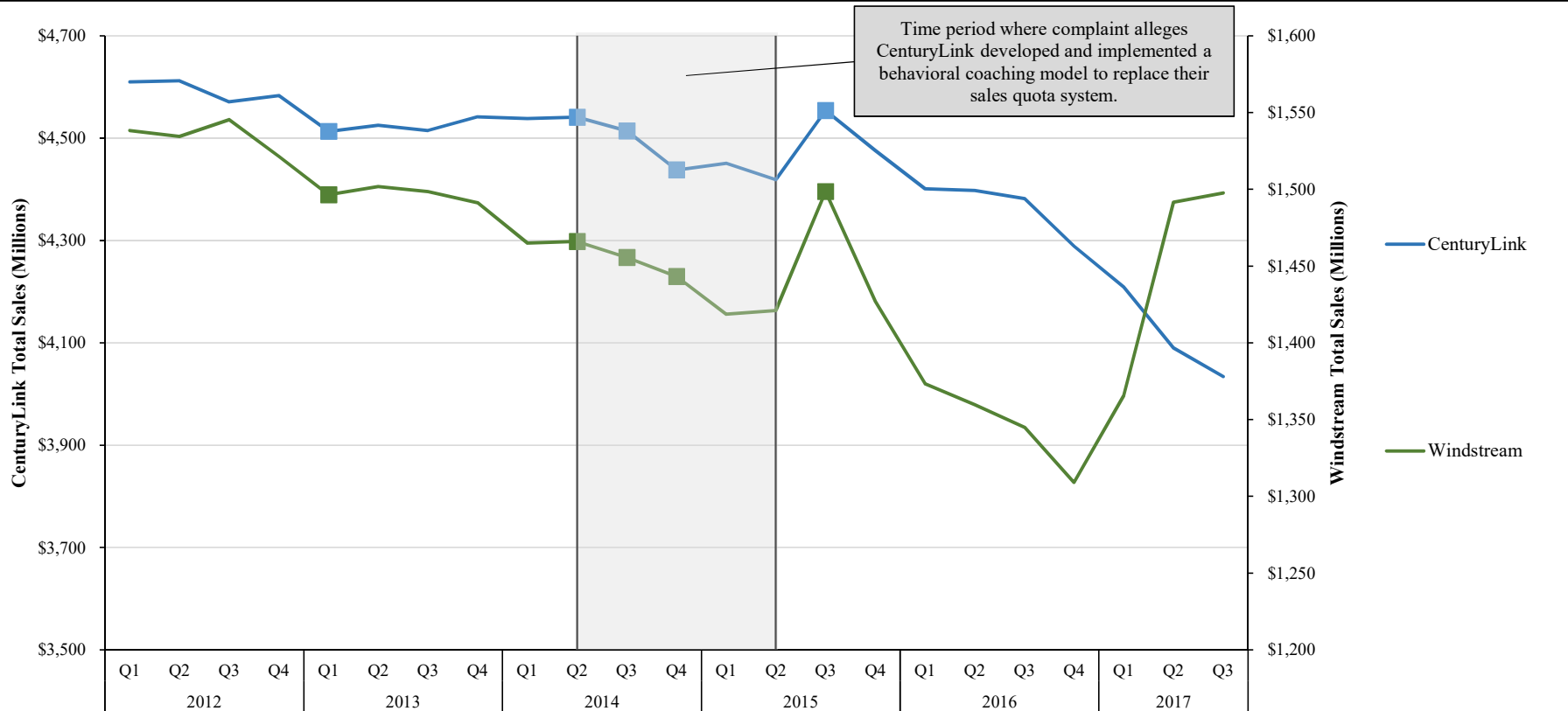
EXHIBIT 18E
CENTURYLINK EARNINGS AND REVENUE SURPRISES ON ANNOUNCEMENT DATES

	FYQ	Fiscal	Abnormal Return				EPS				Revenue							Abnormal				
		Period	Announcement	Measurement	Number of			Surprise			Actual	Consensus	Number of	Surprise								
		End Date			Date	Date	Actual	Consensus	Estimates	+ / -				\$	%	(\$MM)	(\$MM)		Estimates	+ / -	\$MM	%
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P]	[Q]					
[1]	2013 Q1	31-Mar-13	8-May-13	9-May-13	\$0.76	\$0.68	18	+	\$0.08	11.2%	\$4,513	\$4,509	16	+	\$3.68	0.1%	0.9%					
[2]	2013 Q2	30-Jun-13	7-Aug-13	8-Aug-13	\$0.69	\$0.67	20	+	\$0.02	3.5%	\$4,525	\$4,524	18	+	\$0.76	0.0%	(5.8%)					
[3]	2013 Q3	30-Sep-13	6-Nov-13	7-Nov-13	\$0.63	\$0.63	20	+	\$0.00	0.4%	\$4,515	\$4,512	17	+	\$3.33	0.1%	(4.7%)					
[4]	2013 Q4	31-Dec-13	12-Feb-14	13-Feb-14	\$0.38	\$0.59	17	-	(\$0.21)	(35.6%)	\$4,542	\$4,520	14	+	\$21.66	0.5%	1.0%					
[5]	2014 Q1	31-Mar-14	7-May-14	8-May-14	\$0.66	\$0.61	14	+	\$0.05	8.9%	\$4,538	\$4,478	11	+	\$60.21	1.3%	6.3%					
[6]	2014 Q2	30-Jun-14	6-Aug-14	7-Aug-14	\$0.72	\$0.64	15	+	\$0.08	13.0%	\$4,541	\$4,495	12	+	\$46.00	1.0%	0.6%					
[7]	2014 Q3	30-Sep-14	5-Nov-14	6-Nov-14	\$0.63	\$0.62	15	+	\$0.01	2.1%	\$4,514	\$4,505	12	+	\$9.16	0.2%	(5.8%)					
[8]	2014 Q4	31-Dec-14	11-Feb-15	12-Feb-15	\$0.60	\$0.63	15	-	(\$0.03)	(4.3%)	\$4,438	\$4,467	12	-	(\$29.04)	(0.7%)	(3.7%)					
[9]	2015 Q1	31-Mar-15	5-May-15	6-May-15	\$0.67	\$0.58	14	+	\$0.09	14.6%	\$4,451	\$4,473	11	-	(\$21.78)	(0.5%)	(1.7%)					
[10]	2015 Q2	30-Jun-15	5-Aug-15	6-Aug-15	\$0.55	\$0.60	13	-	(\$0.05)	(8.7%)	\$4,419	\$4,429	11	-	(\$9.88)	(0.2%)	(1.7%)					
[11]	2015 Q3	30-Sep-15	4-Nov-15	5-Nov-15	\$0.70	\$0.68	16	+	\$0.02	2.8%	\$4,554	\$4,553	13	+	\$1.18	0.0%	3.1%					
[12]	2015 Q4	31-Dec-15	10-Feb-16	11-Feb-16	\$0.80	\$0.65	15	+	\$0.15	23.5%	\$4,476	\$4,416	12	+	\$60.28	1.4%	10.7%					
[13]	2016 Q1	31-Mar-16	4-May-16	5-May-16	\$0.71	\$0.68	16	+	\$0.03	4.6%	\$4,401	\$4,425	14	-	(\$24.10)	(0.5%)	(6.8%)					
[14]	2016 Q2	30-Jun-16	3-Aug-16	4-Aug-16	\$0.63	\$0.59	16	+	\$0.04	5.9%	\$4,398	\$4,391	13	+	\$7.49	0.2%	(0.8%)					
[15]	2016 Q3	30-Sep-16	31-Oct-16	31-Oct-16	\$0.56	\$0.55	15	+	\$0.01	2.2%	\$4,382	\$4,377	13	+	\$5.39	0.1%	(12.7%)					
[16]	2016 Q4	31-Dec-16	8-Feb-17	9-Feb-17	\$0.54	\$0.56	14	-	(\$0.02)	(4.4%)	\$4,289	\$4,325	12	-	(\$35.93)	(0.8%)	(0.6%)					
[17]	2017 Q1	31-Mar-17	3-May-17	4-May-17	\$0.52	\$0.53	15	-	(\$0.01)	(2.7%)	\$4,209	\$4,268	13	-	(\$58.99)	(1.4%)	(5.2%)					

Notes and Sources:

- [1] Consensus analyst forecast data is from Thomson Reuters I/B/E/S database.
- [2] Consensus analyst forecast represents the average (mean) value of individual analysts' forecasts available just prior to the earnings announcement.
- [3] + / - indicates whether the actual EPS or revenue exceeded or was below consensus analyst estimates, respectively.
- [4] Announcement Date reflects the date on which earnings were announced. For announcements made after 4:00 PM EST, Abnormal Return are measured on the first trading day following the Announcement Date. All of CenturyLink's earnings announcements, except the one on October 31, 2016, were made after 4:00 PM.
- [5] Abnormal Returns in column [Q] that are statistically significantly different from zero at the 95% confidence level or above are bolded.

EXHIBIT 19A
QUARTERLY SALES OF CENTURYLINK AND WINDSTREAM
2012 Q1 - 2017 Q3



Notes and Sources:

- [1] Data are from CenturyLink and Windstream 10-K's and 10-Q's.
- [2] The Class Period is from March 1, 2013, to July 12, 2017.
- [3] Markers indicate quarters which have explanatory information. See Exhibit 19B for more information.
- [4] Language on the time period for behavioral coaching is from the Complaint, ¶¶ 109-120.
- [5] On February 27, 2017, Windstream completed its merger & acquisition of EarthLink Holdings Corp. See Windstream's 2017 Annual Report.
- [6] On July 28, 2017, Windstream completed its merger & acquisition of Broadview Networks Holdings, Inc. See Windstream's 2017 Annual Report.

EXHIBIT 19B
QUARTERLY REVENUE NARRATIVE COMPARISON FOR CENTURYLINK AND WINDSTREAM
2013 Q1 - 2015 Q3

Time Period Being Referenced	Direction of Quarterly Revenue Movement	Source	Common Explanation	Supporting CTL Quotes	Supporting WIN Quotes
2013 Q1	DOWN	10-Q's	Both companies acknowledge a necessary strategy for the foreseeable future: attracting more consumer broadband subscribers to remain competitive in the telecommunications landscape.	Consumer: "We continue to focus on increasing subscribers of our broadband services in our consumer segment . In order to remain competitive, we believe continually increasing connection speeds is important." (26)	"We are continuing to accomplish our strategy in 2013 by shifting revenue streams away from traditional consumer voice services to our strategic growth areas of business services and consumer broadband ." (35)
2013 Q1	DOWN	10-Q's	Losses in consumer voice lines, as many consumers are swapping their current services for newer technologies and services at cable companies and wireless carriers, expected to negatively impact revenue for years to come.	Consumer: "Our voice revenues have been, and we expect they will continue to be, adversely affected by access line losses. Intense competition and product substitution continue to drive our access line losses. For example, many consumers are substituting cable and wireless voice and electronic mail, texting and social networking services for traditional voice telecommunications services." (26)	Consumer: "We expect the trend of consumer voice line loss to continue as a result of competition from wireless carriers, cable companies and other providers using emerging technologies ." (40) "Voice and switched access revenues will continue to be adversely impacted by future declines in voice lines due to competition from cable companies, wireless carriers and providers using other emerging technologies." (37)
2013 Q1	DOWN	Earnings Releases	Low revenue-generating quarter in consumer.	Consumer: "Generated \$1.51 billion in total revenues, a decrease of 3.4% from first quarter 2012 , reflecting the continued decline in legacy services..." (4)	Consumer: "Overall consumer service revenues were \$328 million, a decrease of 2 percent from the same period a year ago ." (1)
2013 Q1	DOWN	10-Q's	The CAF order, referred to as intercarrier compensation reform by Windstream, is expected to result in ongoing switched access revenue declines for both companies' wholesale segments.	Wholesale: "We believe that changes related to the Connect America and Intercarrier Compensation Reform order ("CAF order") adopted by the Federal Communications Commission ("FCC") on October 27, 2011 will substantially increase the pace of reductions in the amount of switched access revenues we receive in our wholesale segment ." (29)	Wholesale: "The diversification of our revenue streams helps us to offset revenue declines driven by consumer customer losses and wholesale revenue declines driven by intercarrier compensation reform ." (35)
2013 Q1	DOWN	Earnings Releases	Low revenue-generating quarters in wholesale, largely to do with the access rate reductions coming from CAF Order(3) that became effective July 1, 2012.	Wholesale: "Generated \$907 million in total revenues, a decrease of 5.7% from first quarter 2012, reflecting the continued decline in legacy revenues, primarily driven by the implementation of access rate reductions effective July 1, 2012, in accordance with the CAF Order(3) and lower long distance and switched access minutes of use." (4)	Wholesale: "Wholesale revenues in the first quarter were \$152 million, a decline of 17 percent from the same period a year ago due to lower switched access revenues from declining consumer voice lines and lower intrastate access rates as part of intercarrier compensation reform implemented in July 2012." (1)
2014 Q2	UP	10-Q's	Significant increases in hosting revenues occurred for CenturyLink and Windstream, both relatively new to the hosting segment and still adding data centers.	Hosting: "Consists primarily of providing colocation, managed hosting and cloud hosting services to commercial, enterprise, global, governmental and wholesale customers ." (13) "The increase in segment revenues for both periods was primarily due to growth in managed hosting and colocation services . [...] The increase in revenues for both periods was driven by new customer growth and the impact of revenues contributed from recent acquisitions." (36)	" Increases in data center and managed services revenues; which include cloud computing, colocation, dedicated server and disaster recovery solutions for business customers; reflected increased demand and incremental sales of these services . In order to support the higher demand, we have added four data centers since the first quarter of 2013." (50)
2014 Q2	UP	Earnings Releases	Advancements and additions to hosting and managed services resulted in segment increases for both CenturyLink and Windstream.	Hosting: " Managed hosting revenues were \$148 million, representing a 9.6% increase from second quarter 2013 , and colocation revenues were \$158 million, a 1.9% increase over the same period a year ago ." (4) " Opened a data center in Minneapolis, Minnesota offering colocation, cloud and managed hosting services connected to CenturyLink's IP backbone and global data center footprint." (4)	" Data center and managed services revenues , which total approximately \$31 million, increased 20 percent from the same period a year ago ." (1)

EXHIBIT 19B
QUARTERLY REVENUE NARRATIVE COMPARISON FOR CENTURYLINK AND WINDSTREAM
2013 Q1 - 2015 Q3

Time Period Being Referenced	Direction of Quarterly Revenue Movement	Source	Common Explanation	Supporting CTL Quotes	Supporting WIN Quotes
2014 Q3	DOWN	10-Q's	Both companies acknowledge a necessary strategy for the foreseeable future: attracting more consumer broadband subscribers to remain competitive in the telecommunications landscape.	Consumer: "In order to remain competitive and attract additional residential broadband subscribers , we believe it is important to continually increase our broadband network's scope and connection speeds. " (30)	"We continue to transition revenue streams away from traditional consumer voice services to our strategic growth areas of business services and consumer broadband... " (47)
2014 Q3	DOWN	10-Q's	Competition and technological advancements in other companies have resulted in, and will continue to result in, revenue losses associated with voice services, according to both companies.	Consumer: " Intense competition and product substitution continue to drive our access line losses. [...] We expect that these factors will continue to negatively impact our business. " (30) "The decline in legacy services revenues for both periods was primarily due to declines in local and long-distance service volumes associated with access line losses resulting from the competitive and technological changes described above." (31)	Consumer: "Voice and switched access revenues will continue to be adversely impacted by future declines in voice lines due to competition from cable companies, wireless carriers and providers using other emerging technologies." (49) "We expect the trend of consumer voice line loss to continue as a result of competition from wireless carriers, cable companies and other providers using emerging technologies. " (52) "Decreases in voice service revenues were primarily attributable to the decline in voice lines... " (53)
2014 Q3	DOWN	10-Q's	The wholesale segment for both companies continues to be affected by revenue losses caused by switched access rate reductions coming from the Connect America and Inter-carrier Compensation Reform order.	Wholesale: "Our switched access revenues have been and will continue to be impacted by changes related to the Connect America and Inter-carrier Compensation Reform order ("CAF order") adopted by the Federal Communications Commission ("FCC") on October 27, 2011, which we believe has increased the pace of reductions in the amount of switched access revenues we receive in our wholesale segment." (34)	Wholesale: "Revenues from these services are expected to decline due to voice line losses and continued reductions in switched access rates. " (53) " Decreases in switched access revenues were primarily due to the impact of inter-carrier compensation reform and a continued decline in network demand." (53)
2014 Q3	DOWN	Earnings Releases	Wholesale revenue losses due to access rate reductions from the implementation of the inter-carrier compensation reform, or CAF Order.	Wholesale: "Generated \$843 million in total revenues, a decrease of 4.0% from third quarter 2013... primarily driven by lower long distance and switched access minutes of use, along with access rate reductions from implementation of the CAF Order. "	Wholesale: "Wholesale revenues in the third quarter were \$132 million, a decrease of 11 percent from the same period a year ago primarily due to rate reductions from inter-carrier compensation reform. " (1)
2014 Q3	DOWN	Earnings Releases	Revenue measures show declines in quarters for both companies.	"Achieved core revenues of \$4.08 billion in third quarter, a 0.6% year-over-year decline, compared with a 1.0 % year-over-year decline in third quarter 2013... " (1) " Operating revenues for third quarter 2014 were \$4.514 billion compared to \$4.515 billion in third quarter 2013." (2)	" Total revenues and sales were \$1.46 billion in the third quarter, a decline of 2.9 percent from the same period a year ago. " (1)
2014 Q4	DOWN	10-K's	Consumer revenues of CenturyLink and Windstream continue to be impacted by access lines losses and voice services declines.	Consumer: " Consumer segment revenues decreased by \$10 million, or less than 1%, for year ended December 31, 2014 as compared to the year ended December 31, 2013..." (53) "The decline in legacy services revenues for both periods was primarily due to declines in local and long-distance service volumes associated with access line losses... " (53)	Consumer: "For the year ended December 31, 2014, consumer voice lines decreased by approximately 107,700, or 6.3 percent compared to 119,600, or 6.5 percent during 2013. " (F-7) "Decreases in voice service revenues were primarily attributable to declines in voice lines. " (F-8)
2014 Q4	DOWN	Earnings Releases	Continuing overall revenue quarterly and yearly decreases in both companies.	"Achieved operating revenues of \$4.44 billion, including core revenues ¹ of \$4.05 billion in fourth quarter; Full-year 2014 operating revenues of \$18.0 billion, a 0.4% decline from full-year 2013. " (1) " CenturyLink's fourth quarter revenues came in slightly lower than anticipated... " (1)	" Total revenues and sales were \$1.4 billion in the fourth quarter, a decline of 3 percent from the same period a year ago, and \$5.8 billion for the year, a decline of 3 percent year-over-year. " (1) "Windstream produced strong cash flow in 2014, although total revenues were lower than expected. " (1)

EXHIBIT 19B
QUARTERLY REVENUE NARRATIVE COMPARISON FOR CENTURYLINK AND WINDSTREAM
2013 Q1 - 2015 Q3

Time Period Being Referenced	Direction of Quarterly Revenue Movement	Source	Common Explanation	Supporting CTL Quotes	Supporting WIN Quotes
2015 Q3	UP	10-Q's	CAF Phase-2 funding substantially increases revenue for both companies in this quarter.	<p>"Our total operating revenues increased by \$40 million, or 1%, for the three months ended September 30, 2015 as compared to the three months ended September 30, 2014. The increase in total operating revenues was primarily due to the additional revenue of \$158 million recorded in the third quarter of 2015 under the FCC's CAF Phase 2 high-cost support ("CAF Phase 2 Support") program..." (27)</p> <p>"The increase in other operating revenues was primarily due to additional revenue recorded under the CAF Phase 2 Support program and higher revenues related to an increased universal service fund contribution factor during the first seven months of 2015..." (27)</p>	<p>"Operating results for the three and nine month periods ended September 30, 2015 were favorably impacted by additional subsidy revenues received from the Connect America Fund ("CAF") Phase II, growth in enterprise revenues, reflecting increased demand for integrated data and voice services, multi-site networking and data center services..." (48)</p> <p>"Federal USF and CAF revenues primarily consists of frozen USF support, CAF Phase II support and ARM. The increases in the three and nine month periods ended September 30, 2015 are mostly attributable to the CAF Phase II incremental support of \$72.8 million received during the third quarter of 2015, which was retroactive to January 1, 2015..." (53)</p>
2015 Q3	UP	Earnings Releases	CAF Phase-2 funding drives revenue increases for both companies in this quarter.	"Operating revenues for third quarter 2015 were \$4.55 billion compared to \$4.51 billion in third quarter 2014 driven by the \$150 million increase in high-cost support revenues due to the acceptance of Connect America Fund Phase 2 (CAF Phase 2) support during third quarter 2015..." (2)	"Total revenue was \$1.5 billion in the third quarter, up \$80 million sequentially due to organic growth of \$7 million and incremental CAF-2 revenue of \$73 million." (1)
2015 Q3	UP	Earnings Releases	Revenue growth shown in business high-bandwidth data, including WAVE and Ethernet services, and business/consumer services like high-speed internet.	"Revenue from high-bandwidth data services provided to Business customers, including MPLS, Ethernet and Wavelength, grew more than 7% year-over-year; Revenue from Consumer strategic services also grew more than 7% year-over-year." (2)	<p>"Consumer service revenue was up on a sequential basis with continued growth in high-speed Internet bundled revenue." (1)</p> <p>"Carrier service revenues were \$169 million, aided by growth in new high-bandwidth WAVE sales and wireless Ethernet." (1) ⁶</p>

Notes and Sources:

[1] All quotes are from CenturyLink and Windstream earnings reports, 10-K's, and 10-Q's from the quarter in the column Time Period Being Referenced.

[2] The column Direction of Quarterly Revenue Trends indicates whether total revenue increased or decreased (e.g. down or up) quarter over quarter for CenturyLink and Windstream, respectively.

[3] These common narratives help assist in understanding revenue trends in the quarters identified in Exhibit 19A.

[4] Effective November 2014, CenturyLink re-assigned the Wholesale revenue reporting segment under Business.

[5] Access Lines are the portion[s] of a leased telephone line between the end user's location and the Central Office. The circuit used to enter the telecommunications network.

[6] Carrier revenues, for Windstream, include revenues from other carriers for special access circuits and fiber connections as well as voice and data services sold on a wholesale basis.

EXHIBIT 19C

SELECTED QUOTES FROM ANALYST REPORTS REFERENCING CENTURYLINK AND WINDSTREAM

Date	Firm	Type	Quote
4/9/2013	Deutsche Bank	Industry	We are initiating on CenturyLink (CTL), Frontier (FTR) and Windstream (WIN) with Holds.
5/9/2013	Bank of America Merrill Lynch	CenturyLink	We are raising our price objective to \$41 from \$38. Our PO is based on a 5.6x 2014 EV/EBITDA multiple, which compares to FTR at 4.9x and WIN at 5.7x, and implies a 5.3% dividend yield.
8/7/2013	Oppenheimer	Industry	CenturyLink (CTL – Perform) 2Q13 Preview: CTL reports after the close and we expect results to slightly exceed the mid-point of guidance with weakish customer volumes (HSI net adds of 45K) given strong performance in cable. [...] Windstream (WIN – Perform) 2Q13 Preview [...] Enterprise revenue could miss given VZ and T’s results but WIN noted improved activity in its enterprise pipeline in 1Q13, so we don’t expect an issue.
12/17/2013	Bank of America Merrill Lynch	CenturyLink	At 4.8x 2014 EV/EBITDA today, CenturyLink is trading at a deep discount relative to its own historical valuation and peer companies, despite having the best underlying business fundamentals, in our view. [...] Table 1: CTL compares favorably to FTR and WIN but is the cheapest stock in the group
8/6/2014	Bank of America Merrill Lynch	CenturyLink	Following peer company Windstream ’s announcement last week that it expects to spin off its network assets into a REIT, we will look for CenturyLink to provide its view on the applicability of the REIT structure to CenturyLink’s business.
12/4/2014	Bernstein	CenturyLink	We note that – like the other high-yield, regional, wireline-only carriers in our coverage (Frontier and Windstream) – CenturyLink has significantly outperformed the market year-to-date, with a 34% YTD total shareholder return (compared to 15% for the S&P total return index).
1/7/2015	Citi Research	Industry	CenturyLink seemed more open to the possibility for a REIT structure to the extent the pending Windstream transaction (and separation) can get the necessary regulatory approvals, is well received by investors, and can be operated smoothly post the split. We don’t expect CTL to reach a decision near-term, but believe the company could more seriously consider the prospects later in 2015 after it has a chance to watch the outcome from Windstream ’s pending conversion.
2/7/2015	Morgan Stanley	CenturyLink	Windstream announced plans to split its business into two separate companies by spinning off existing network assets (fiber, copper real estate and other fixed assets) into a publicly traded REIT. CenturyLink has said they will closely monitor Windstream's progress, but their NOLs make a transaction less of a near term priority. They have expressed more interest in a stapled REIT structure.
2/18/2015	Goldman Sachs	CenturyLink	Our key point is that Windstream has not yet demonstrated that utilizing a REIT structure creates long-term value for its shareholders. We therefore think it is unlikely that CTL will pursue a near-term separation of its core telecom assets into a REIT.
6/25/2015	Goldman Sachs	CenturyLink	These peers include AT&T, Frontier, Verizon and Windstream . The second is the benchmark 9-10 year bonds issued by CTL and its non-investment grade peers in the US telecom sector (Frontier and Windstream). [...] We believe that CTL’s dividend yield should be closer to the yields of wireline peers Frontier and Windstream than primarily-wireless providers AT&T and Verizon.

EXHIBIT 19C

SELECTED QUOTES FROM ANALYST REPORTS REFERENCING CENTURYLINK AND WINDSTREAM

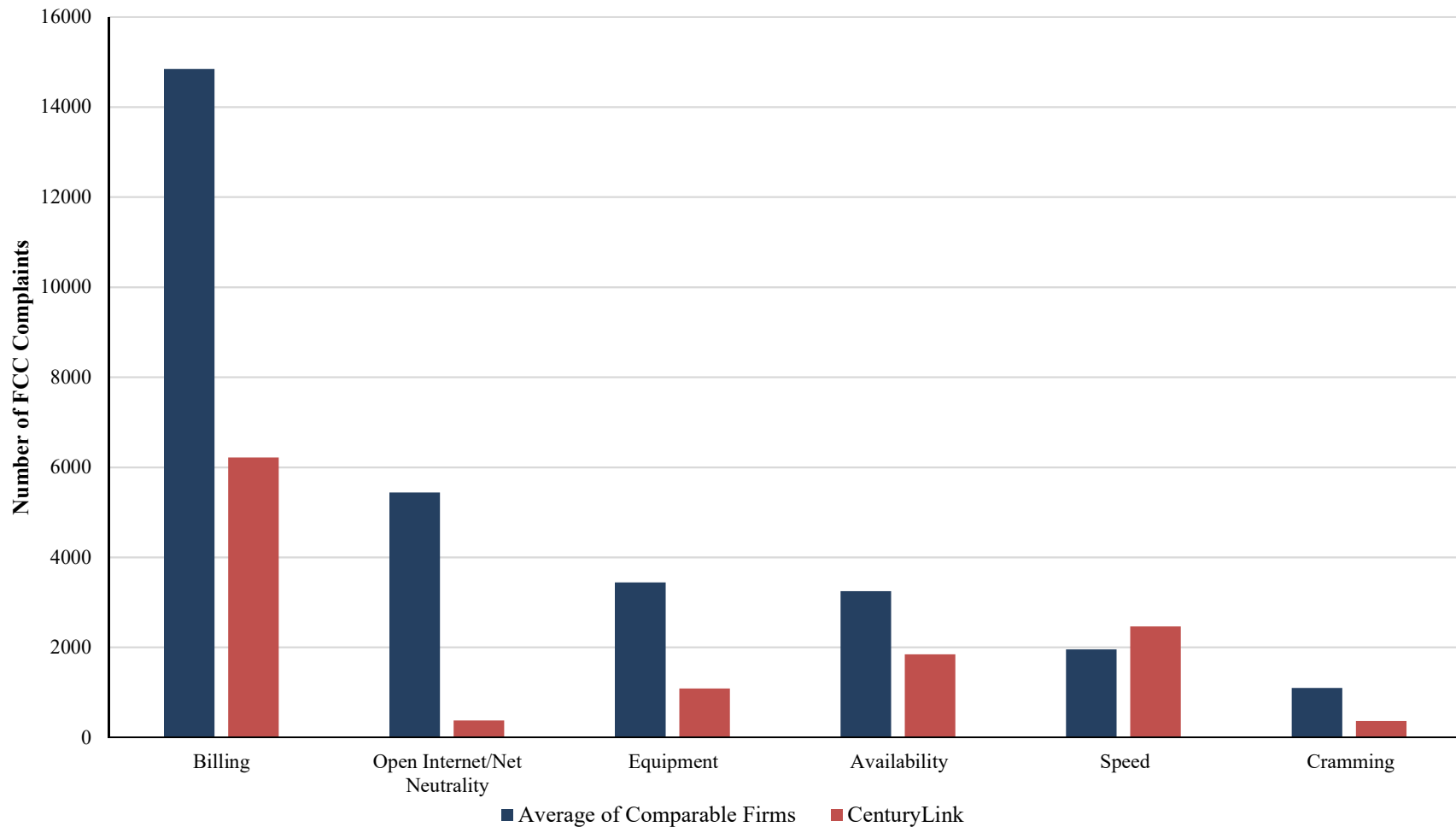
Date	Firm	Type	Quote
7/16/2015	Bernstein	Industry	Historically, because of their monopoly networks, the supply of enterprise fixed-voice-and-data services has been dominated by incumbent local telcos ("ILECs" such as CenturyLink, Frontier, Verizon, Windstream's ILEC segment, and legacy SBC) and long-distance inter-exchange carriers ("IXCs", such as old AT&T, MCI, and Sprint).
11/5/2015	Morgan Stanley	CenturyLink	We were pleased to hear CenturyLink announce they were in the early stages of exploring strategic alternatives for their data center business. They admit that they don't feel in a position to commit the capital needed to grow that business and acknowledge the attractive data center transaction multiples we are seeing including Windstream's recent \$575m sale to TierPoint at an estimated 14x EBITDA multiple.
7/28/2016	Citi Research	Industry	We preview 2Q/16 earnings for CenturyLink, Consolidated, Frontier, and Windstream within this note.
10/7/2016	Citi Research	Industry	With a lower magnitude of change now anticipated by the softer proposal from the FCC Chairman, we see that shares of FTR and CTL are trading higher on what we would suspect is the reduction in perceived risk, whereas WIN is trading lower on the likely reduction in the perceived benefit. We have historically viewed this as headline risk and did not specifically incorporate future risk or opportunity from the potential regulatory change in our estimates. We remain a Seller on Frontier on today's strength based on our core concerns around the direction of OIBDA, financial leverage and risk to the dividend. We remain Neutral on CTL and WIN shares without change to our thesis on each, as well.
3/22/2017	Goldman Sachs	Industry	2016 was a difficult year for the major regional wireline telcos: CenturyLink, Frontier and Windstream .
3/29/2017	Morgan Stanley	CenturyLink	Our \$27 price target represents a 8% dividend yield, a discount to CenturyLink's long-term average, and a premium to RLEC peers (Frontier and Windstream), which we think is warranted giving the superior relative growth profile pro forma for Level 3.
6/26/2017	Barclays	Industry	CenturyLink, Verizon and Windstream battle over 90-day copper retirement period: Centurylink, Verizon and Windstream are once again engaged in a battle over the timelines for copper retirement set by the FCC at a time when new Chairman Ajit Pai is looking to reverse rules set in place by his predecessor Tom Wheeler. Centurylink and Verizon - two of the largest U.S.-based ILECs - maintain that having a longer copper retirement period will delay their migrations from copper to fiber. In a recent FCC filing, Centurylink maintains that it rarely is asked to extend a shutdown of copper facilities. Windstream, which has been championing reforms for copper retirement and special access services, said in a filing that the challenge for CLECs is the transition of business customers to new services. (Source: June 20, 2017, Fierce Telecom, Link: http://www.fiercetelecom.com/telecom/centurylinkverizon-and-windstream-battle-over-90-day-copper-retirement-period)

EXHIBIT 19C

SELECTED QUOTES FROM ANALYST REPORTS REFERENCING CENTURYLINK AND WINDSTREAM

Date	Firm	Type	Quote
7/24/2017	Cowen and Company	Industry	Shares in the wireline ILEC/RLEC space (CenturyLink, Frontier, Windstream) have endured the worst three consecutive quarters in industry history, with shares plummeting an average of -20% in 4Q16, -21% in 1Q17, and -24% in 2Q17 (we note another -5% in 3Q17 thus far), mostly from Frontier and Windstream as CenturyLink shares are being supported by the Level 3 acquisition. The declines are partly driven by 1) broader fundamental erosion, specifically outsized legacy service declines and muted strategic growth against aggressive cable operators, and 2) partly by company specific issues (Frontier: CTF integration pain, CenturyLink: more recently consumer fraud allegations, Windstream : BDS headwinds).
8/23/2017	Morgan Stanley	Industry	2Q17 reported financials were broadly in-line with the market's cautious expectations (albeit with the help of some accounting benefits), but the RLECs (CTL, FTR, WIN) have still dramatically underperformed since their respective earnings announcements, as the in-line 2Q17 results were coupled with more tepid guidance, and in Windstream's case, an unexpected dividend cut.
9/18/2017	UBS	Industry	MPLS is a high margin, cash cow for the carriers. We believe moving from MPLS to Internet connectivity lowers the cost per bit for business customers in the 50-400x range. A portion of special access revenues are also at risk as companies move traffic to broadband. CenturyLink has the biggest exposure to this issue with 75% of revenues (pro forma with Level 3) coming from the business market (including wholesale), followed by Windstream at 69%, and Frontier at 45%.
10/9/2017	Morgan Stanley	Industry	The significant underperformance of both Frontier and Windstream following dividend cuts earlier this year will likely underscore to the Board the risk that the market would view any dividend cut as a very negative signal. Indeed CenturyLink's stock fell 22% back in 2013 after announcing a 25% dividend cut.
11/7/2017	Morgan Stanley	CenturyLink	Can CenturyLink escape the RLEC Blues?: CenturyLink (-29%) Windstream (-74%) and Frontier (-84%) have each significantly underperformed YTD, following dividend cuts from Frontier and Windstream , and reduced guidance from all three.
12/13/2017	Morgan Stanley	CenturyLink	2017 was a challenging year for wireline telecom. CenturyLink fared better than Frontier and Windstream (-78% YTD), but its results were still below expectations.
12/15/2017	Barclays	Industry	In our view, relative to Centurylink, Frontier's dividend is more at risk in being cut further over the near term. CTL's ability to deliver steady EBITDA post synergies should provide the necessary runway to steady financials for at least the near term. Longer-term questions are, however, likely to linger particularly given what we believe will be a difficult integration process. Leverage levels remain high across the sector. In our view, Windstream seems to have the largest predicament.

EXHIBIT 20A
CENTURYLINK, INC. AND COMPARABLE FIRMS
TOTAL NUMBER OF FCC COMPLAINTS BY ISSUE TYPE
October 2014 - June 2018

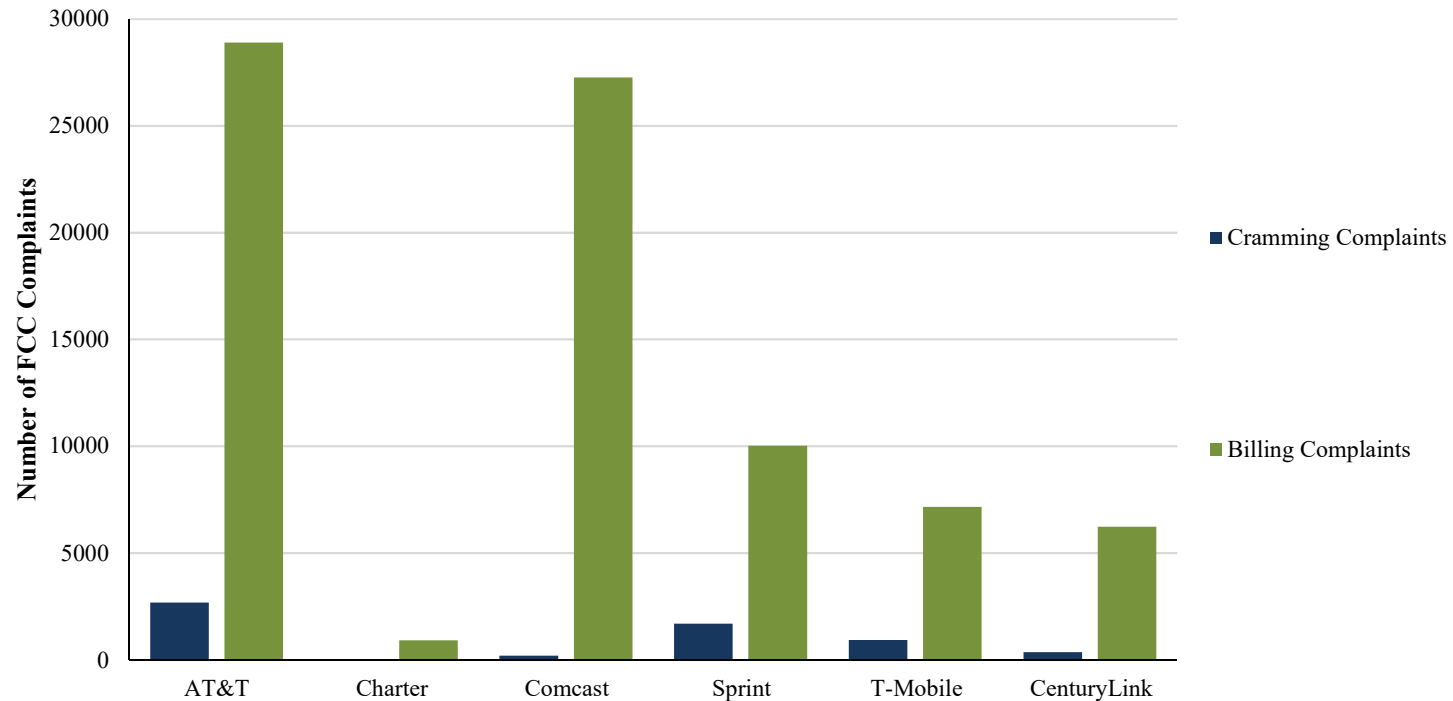


Notes and Sources:

[1] Data are from FOIA Request No. 2018-697.

[2] Comparable firms are AT&T, Charter, Comcast, Sprint, and T-Mobile.

EXHIBIT 20B
TOTAL FCC CRAMMING AND BILLING COMPLAINTS
October 2014 - June 2018

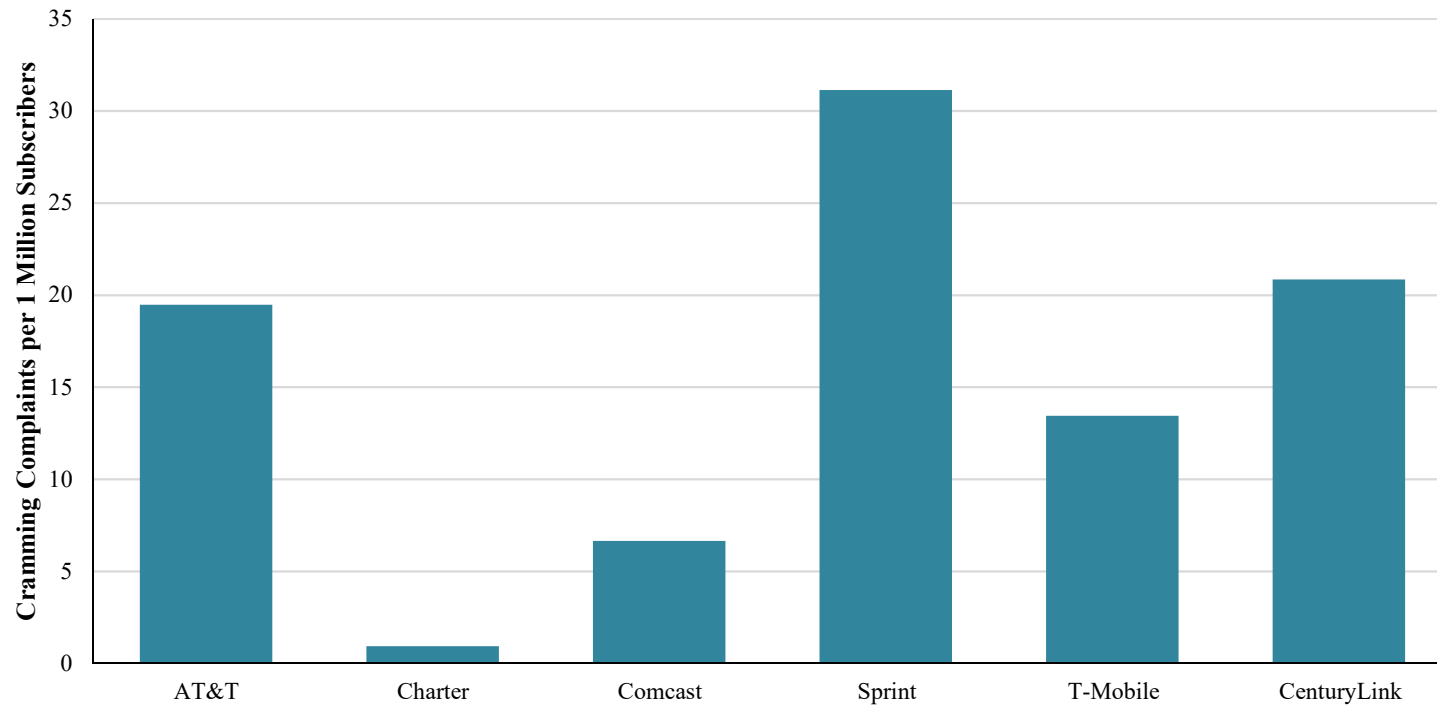


Notes and Sources:

[1] Data are from FOIA Request No. 2018-697.

[2] Data for firms other than CenturyLink may be from a shorter time period than stated, the language in the FOIA Request is ambiguous as to whether the data collected for other firms is from the same time period.

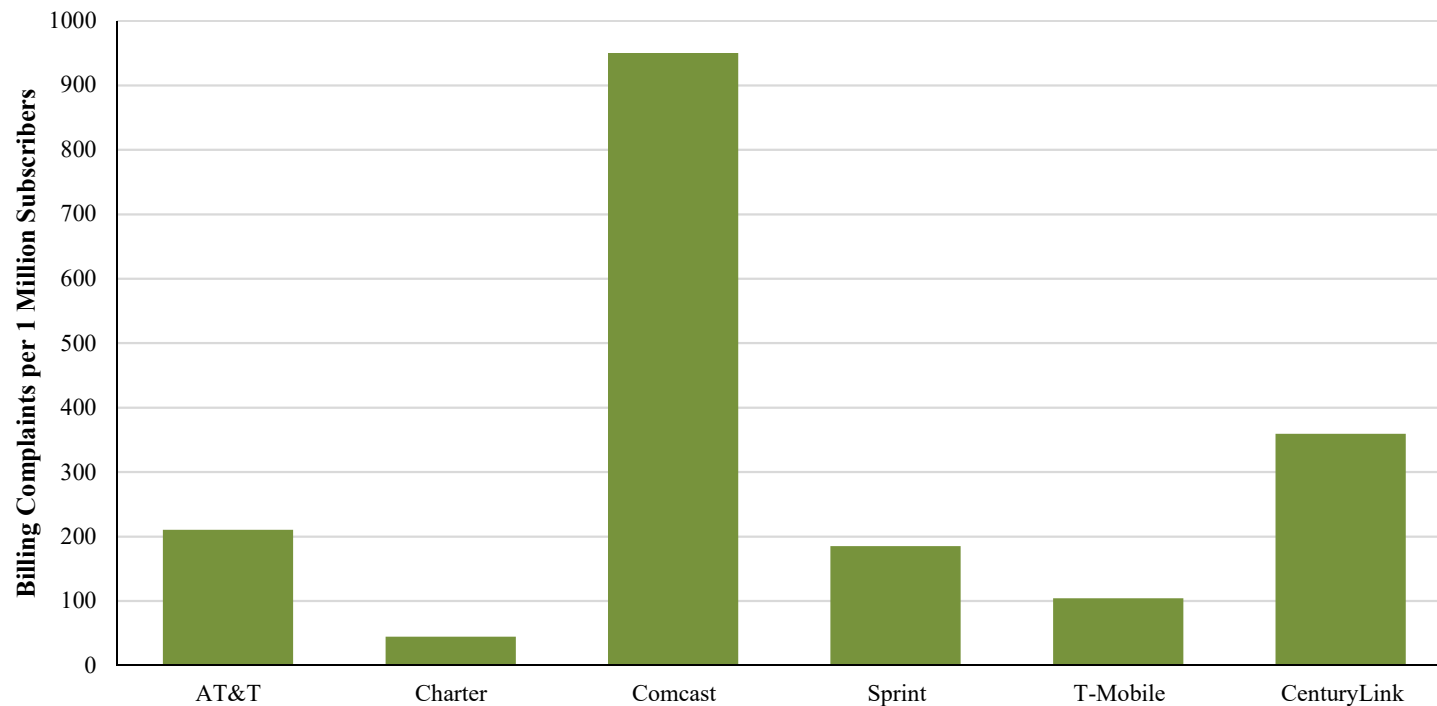
EXHIBIT 20C
TOTAL FCC CRAMMING COMPLAINTS PER 1 MILLION SUBSCRIBERS
October 2014 - June 2018



Notes and Sources:

- [1] Data are from FOIA Request No. 2018-697.
- [2] Data for firms other than CenturyLink may be from a shorter time period than stated, the language in the FOIA Request is ambiguous as to whether the data collected for other firms is from the same time period.
- [3] Data for firm subscriber numbers are from the respective firms' 10-K's and 10-Q's, as most recently reported.

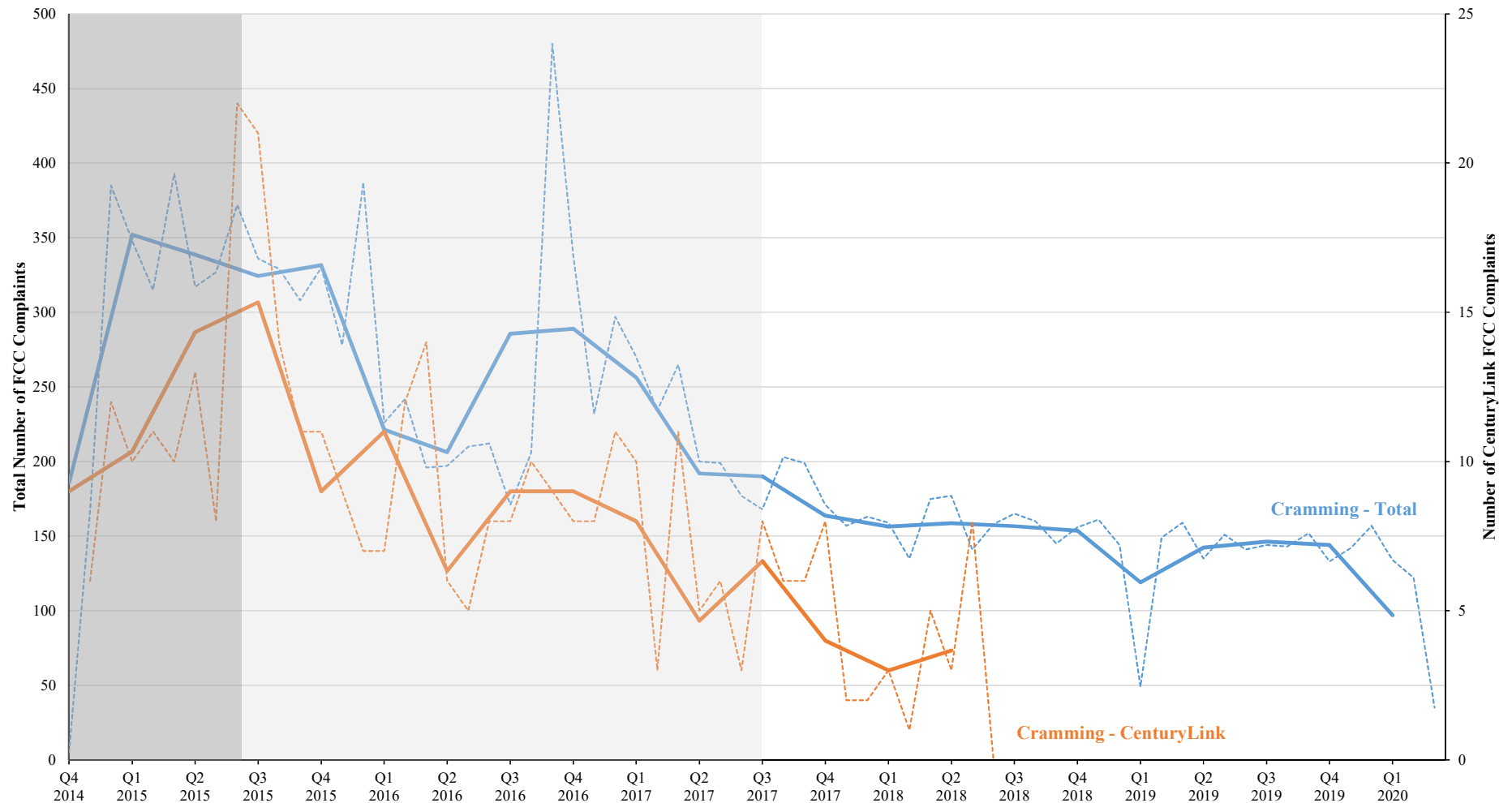
EXHIBIT 20D
TOTAL FCC BILLING COMPLAINTS PER 1 MILLION SUBSCRIBERS
October 2014 - June 2018



Notes and Sources:

- [1] Data are from FOIA Request No. 2018-697.
- [2] Data for firms other than CenturyLink may be from a shorter time period than stated, the language in the FOIA Request is ambiguous as to whether the data collected for other firms is from the same time period.
- [3] Data for firm subscriber numbers are from the respective firms' 10-K's and 10-Q's, as most recently reported.

EXHIBIT 21
NUMBER OF FCC CRAMMING COMPLAINTS OVER TIME
Q4 2014 - Q1 2020



Notes and Sources:

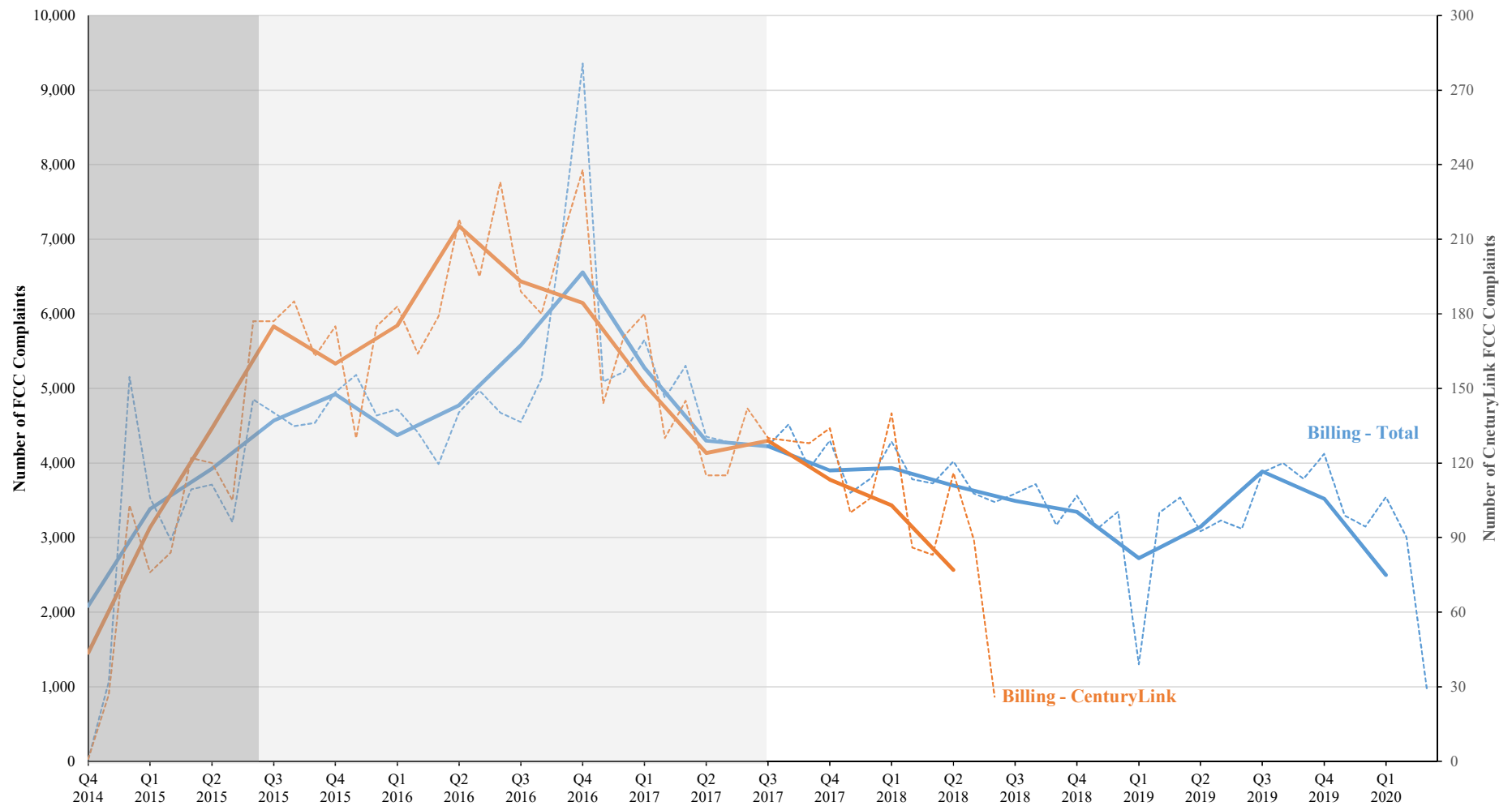
[1] Data are from the Federal Communications Commission's Consumer Complaints Data, available at <https://opendata.fcc.gov/Consumer/CGB-Consumer-Complaints-Data/3xyp-aqkj/data>.

[2] Light dashed lines indicate monthly data. Solid lines indicate a quarterly average of monthly data.

[3] The Class Period is indicated by light grey shading, and runs from March 1, 2013 to July 12, 2017.

[4] The approximate time period where the Complaint alleges that CenturyLink developed and implemented a behavioral coaching model to replace their sales quota system is indicated by dark grey shading, and is from Q2 2014 to Q2 2015.

EXHIBIT 22
NUMBER OF FCC BILLING COMPLAINTS OVER TIME
Q4 2014 - Q1 2020



Notes and Sources:

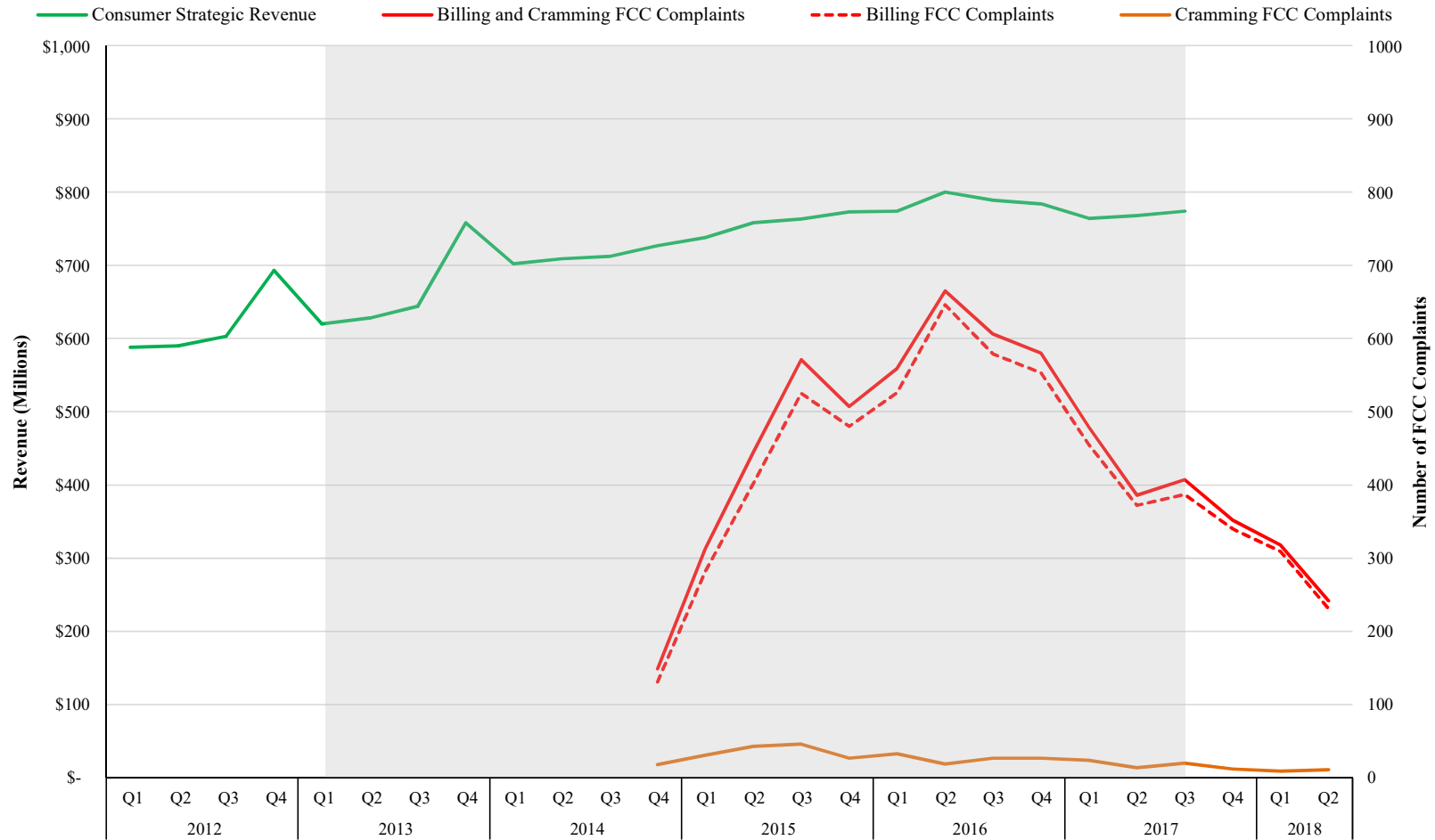
[1] Data are from the Federal Communications Commission's Consumer Complaints Data, available at <https://opendata.fcc.gov/Consumer/CGB-Consumer-Complaints-Data/3xyp-aqkj/data>.

[2] Light dashed lines indicate monthly data. Solid lines indicate a quarterly average of monthly data.

[3] The Class Period is indicated by light grey shading, and runs from March 1, 2013 to July 12, 2017.

[4] The approximate time period where the Complaint alleges that CenturyLink developed and implemented a behavioral coaching model to replace their sales quota system is indicated by dark grey shading, and is from Q2 2014 to Q2 2015.

EXHIBIT 23
CENTURYLINK, INC.
CONSUMER STRATEGIC REVENUES VS. FCC BILLING AND CRAMMING COMPLAINTS
Q1 2012 - Q2 2018



Notes and Sources:

[1] Billing and Cramming data are from FOIA Request No. 2018-697, and are for the time period October 2014 - June 2018.

[2] The Class Period is indicated in light grey shading, and is from March 1, 2013 to July 12, 2017.

[3] Consumer Strategic Revenue data are from CenturyLink's 10-K's and 10-Q's. CenturyLink stops reporting Consumer Strategic Revenue after Q3 2017.

[4] Definitions of Billing and Cramming complaints can be found at <https://consumercomplaints.fcc.gov/hc/en-us/articles/360001201223-Phone-Form-Descriptions-of-Complaint-Issues>

[5] The dotted red line indicates Billing complaints only. The solid red line is a total of Billing and Cramming complaints, and is the sum of the dotted red and solid orange lines.

EXHIBIT 24
TARGET PRICES FROM EQUITY ANALYSTS' REPORTS (CTL)
FY 2017

		Broker Name Publicly Disclosed						Name Listed Only by Contributor #							
		Cowen	Macquarie	MoffettNathanson	Oppenheimer	SunTrust	Wells Fargo	1120	17472	23816	32	36928	392	398136	73704
		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]
[1]	2/8/2017	\$29.00	\$30.00		\$30.00	\$27.00		\$26.00	\$28.00		\$42.00	\$28.00	\$24.00	\$24.00	\$22.00
[2]	2/9/2017	\$27.00	\$28.00		\$30.00	\$27.00		\$26.00	\$25.00		\$42.00	\$28.00	\$24.00	\$24.00	\$21.00
[3]	2/15/2017	\$27.00	\$28.00		\$30.00	\$26.00		\$26.00	\$25.00		\$42.00	\$28.00	\$24.00	\$24.00	\$21.00
[4]	2/22/2017	\$27.00	\$28.00		\$30.00	\$26.00		\$26.00	\$25.00		\$42.00	\$28.00	\$24.00	\$24.00	\$21.00
[5]	2/28/2017	\$27.00	\$28.00	\$23.00	\$30.00	\$26.00		\$26.00	\$25.00		\$42.00	\$28.00	\$24.00	\$24.00	\$21.00
[6]	3/22/2017	\$27.00	\$28.00	\$23.00	\$30.00	\$26.00		\$26.00	\$25.00		\$42.00	\$28.00	\$24.00	\$24.00	\$19.00
[7]	3/29/2017	\$27.00	\$28.00	\$23.00	\$30.00	\$26.00		\$26.00	\$25.00	\$27.00	\$42.00	\$28.00	\$24.00	\$24.00	\$19.00
[8]	5/3/2017	\$27.00	\$28.00	\$23.00	\$30.00	\$26.00		\$26.00	\$25.00	\$27.00	\$42.00	\$28.00	\$24.00	\$24.00	\$19.00
[9]	5/4/2017	\$25.00	\$25.00	\$23.00	\$28.00	\$25.00	\$24.00	\$23.00	\$25.00	\$27.00	\$42.00	\$28.00	\$23.00	\$24.00	\$19.00
[10]	5/5/2017	\$25.00	\$25.00	\$23.00	\$28.00	\$25.00	\$24.00	\$23.00	\$25.00	\$27.00	\$42.00	\$28.00	\$23.00	\$24.00	\$19.00
[11]	5/31/2017	\$25.00	\$25.00	\$23.00	\$28.00	\$25.00	\$24.00	\$23.00	\$25.00	\$27.00	\$42.00	\$28.00	\$23.00	\$24.00	\$19.00
[12]	6/2/2017	\$25.00	\$28.00	\$23.00	\$28.00	\$25.00	\$24.00	\$23.00	\$25.00	\$27.00	\$42.00	\$28.00	\$23.00	\$24.00	\$19.00
[13]	6/16/2017	\$25.00	\$28.00	\$23.00	\$28.00	\$25.00	\$24.00	\$23.00	\$25.00	\$27.00	\$42.00	\$28.00	\$23.00	\$24.00	\$19.00
[14]	6/19/2017	\$25.00	\$28.00	\$23.00	\$28.00	\$25.00	\$24.00	\$23.00	\$25.00	\$27.00	\$42.00	\$28.00	\$23.00	\$24.00	\$19.00
[15]	6/29/2017	\$25.00	\$28.00	\$23.00	\$28.00	\$25.00	\$24.00	\$23.00	\$25.00	\$27.00	\$42.00	\$28.00	\$23.00	\$23.00	\$19.00
[16]	7/5/2017	\$27.00	\$28.00	\$23.00	\$28.00	\$25.00	\$24.00	\$23.00	\$25.00	\$27.00	\$42.00	\$28.00	\$23.00	\$23.00	\$19.00
[17]	7/12/2017	\$27.00	\$28.00	\$23.00	\$28.00	\$25.00	\$24.00	\$23.00	\$25.00	\$27.00	\$42.00	\$28.00	\$23.00	\$23.00	\$19.00
[18]	8/2/2017	\$27.00	\$28.00	\$23.00	\$28.00	\$25.00	\$24.00	\$23.00	\$25.00	\$27.00	\$42.00	\$28.00	\$23.00	\$23.00	\$19.00
[19]	8/3/2017	\$27.00	\$27.00	\$23.00	\$28.00	\$25.00	\$24.00	\$22.00	\$25.00	\$27.00	\$42.00	\$28.00	\$23.00	\$23.00	\$19.00
[20]	8/4/2017	\$27.00	\$27.00	\$23.00	\$28.00	\$25.00	\$24.00	\$22.00	\$25.00	\$27.00	\$42.00	\$28.00	\$23.00	\$23.00	\$19.00
[21]	8/23/2017	\$27.00	\$27.00	\$23.00	\$28.00	\$25.00	\$24.00	\$22.00	\$25.00	\$26.00	\$42.00	\$28.00	\$23.00	\$23.00	\$19.00
[22]	9/5/2017	\$27.00	\$27.00	\$22.00	\$28.00	\$25.00	\$24.00	\$22.00	\$25.00	\$26.00	\$42.00	\$28.00	\$23.00	\$23.00	\$19.00
[23]	9/13/2017	\$27.00	\$20.00	\$22.00	\$28.00	\$25.00	\$24.00	\$22.00	\$25.00	\$26.00	\$42.00	\$28.00	\$23.00	\$23.00	\$19.00
[24]	10/4/2017	\$27.00	\$20.00	\$22.00	\$28.00	\$25.00	\$24.00	\$22.00	\$25.00	\$26.00	\$42.00	\$28.00	\$23.00	\$19.00	\$19.00
[25]	10/5/2017	\$27.00	\$21.00	\$22.00	\$28.00	\$25.00	\$24.00	\$22.00	\$25.00	\$26.00	\$42.00	\$28.00	\$23.00	\$19.00	\$19.00
[26]	10/10/2017	\$27.00	\$21.00	\$22.00	\$28.00	\$25.00	\$24.00	\$22.00	\$25.00	\$26.00	\$42.00	\$28.00	\$20.00	\$19.00	\$19.00
[27]	10/18/2017	\$24.00	\$21.00	\$22.00	\$28.00	\$25.00	\$24.00	\$22.00	\$25.00	\$26.00	\$42.00	\$28.00	\$20.00	\$19.00	\$19.00
[28]	11/1/2017	\$24.00	\$21.00	\$22.00	\$28.00	\$25.00	\$24.00	\$22.00	\$25.00	\$26.00		\$28.00	\$20.00	\$19.00	\$19.00
[29]	11/8/2017	\$18.00	\$21.00	\$22.00	\$28.00	\$25.00	\$24.00	\$22.00	\$25.00	\$26.00		\$28.00	\$20.00	\$19.00	\$19.00
[30]	11/9/2017	\$18.00	\$18.00	\$22.00	\$20.00	\$19.00	\$24.00	\$17.00	\$25.00	\$26.00		\$26.00	\$16.00	\$16.00	\$19.00
[31]	11/10/2017	\$18.00	\$18.00	\$22.00	\$20.00	\$19.00	\$24.00	\$17.00	\$25.00	\$26.00	\$27.00	\$26.00	\$16.00	\$16.00	\$19.00

EXHIBIT 24
TARGET PRICES FROM EQUITY ANALYSTS' REPORTS (CTL)
FY 2017

		Broker Name Publicly Disclosed						Name Listed Only by Contributor #							
		Cowen	Macquarie	MoffettNathanson	Oppenheimer	SunTrust	Wells Fargo	1120	17472	23816	32	36928	392	398136	73704
		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]
[32]	11/13/2017	\$18.00	\$18.00	\$22.00	\$20.00	\$19.00	\$17.00	\$17.00	\$25.00	\$26.00	\$27.00	\$26.00	\$16.00	\$16.00	\$19.00
[33]	11/16/2017	\$18.00	\$18.00	\$22.00	\$20.00	\$19.00	\$17.00	\$17.00	\$18.00	\$26.00	\$27.00	\$26.00	\$16.00	\$16.00	\$19.00
[34]	11/28/2017	\$18.00	\$18.00	\$18.00	\$20.00	\$19.00	\$17.00	\$17.00	\$18.00	\$26.00	\$27.00	\$26.00	\$16.00	\$16.00	\$19.00
[35]	12/13/2017	\$18.00	\$18.00	\$18.00	\$20.00	\$19.00	\$17.00	\$17.00	\$18.00	\$21.60	\$27.00	\$26.00	\$16.00	\$16.00	\$19.00
[36]	1/24/2018	\$18.00	\$18.00	\$18.00	\$20.00	\$19.00	\$17.00	\$17.00	\$22.00	\$21.60	\$27.00	\$26.00	\$17.00	\$16.00	\$17.00
[37]	1/10/2018	\$18.00	\$18.00	\$18.00	\$20.00	\$19.00	\$17.00	\$17.00	\$18.00	\$21.60	\$27.00	\$26.00	\$17.00	\$16.00	\$17.00
[38]	1/8/2018	\$18.00	\$18.00	\$18.00	\$20.00	\$19.00	\$17.00	\$17.00	\$18.00	\$21.60	\$27.00	\$26.00	\$16.00	\$16.00	\$17.00
[39]	2/14/2018	\$18.00	\$18.00	\$18.00	\$20.00	\$19.00	\$17.00	\$17.00	\$22.00	\$21.60	\$27.00	\$26.00	\$17.00	\$16.00	\$17.00

Notes and sources:

- [1] Price targets for ticker CTL from Thomson Reuters Eikon, as of February 24, 2020. I collected price target data from February 8, 2017 (the earnings release date for 2016 full-year financial results) through February 14, 2018 (the earnings release date for 2017 full-year financial results).
- [2] Blanks indicate unavailable data. Blue shading highlights dates of CenturyLink's quarterly/annual earnings releases and 10-Q and 10-K filings (see Exhibit 37), investor conferences at which alleged false and misleading statements were made (see Exhibit 18A) and curative disclosure dates (June 16, June 19, and July 12).
- [3] Contributors [G] - [N] provided estimate to Thomson Reuters Eikon, but chose not to disclose their identity publicly.
- [4] Only displays dates on which at least one broker revised its price target or discontinued / submitted a price target after a break in reporting. Dates presented are the days the brokers released the analysts' reports. Thomson Reuters Eikon typically receives the data from these reports one trading day after the release. I subtract one trading day from dates from Thomson Reuters Eikon data to correct for this delay. Weekends and the nine holidays observed by NYSE non-trading days are taken into account.
- [5] Prices in red highlight price targets that have been revised down. Prices in green highlight price targets that have been revised up.
- [6] Curative disclosure dates (June 16, June 19, and July 12, 2017) are from the Complaint.

EXHIBIT 25
ANNUAL REVENUE FORECASTS FROM EQUITY ANALYSTS' REPORTS (CTL)
FY 2017

		Broker Name Publicly Disclosed								Broker Name Listed Only by Contributor #								
		Gabelli	Macquarie	MoffettNathanson	Morningstar	Oppenheimer	Raymond James	SunTrust	Wells Fargo	1120	17472	23816	32	36928	392	398136	696	73704
		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P]	[Q]
[1]	2/8/2017	\$17,192	\$17,225		\$17,377	\$17,182	\$16,560	\$17,187	\$17,212	\$17,098	\$17,174	\$17,069	\$17,200	\$17,206	\$17,022	\$17,316	\$17,295	\$17,170
[2]	2/9/2017	\$17,192	\$16,702		\$16,944	\$17,051	\$16,560	\$17,187	\$17,045		\$17,135	\$17,069	\$17,001	\$16,973	\$17,022	\$17,106	\$16,557	\$17,053
[3]	2/15/2017	\$17,192	\$16,702		\$16,944	\$17,051	\$16,560	\$17,145	\$17,045		\$17,135	\$17,069	\$17,001	\$16,973	\$17,022	\$17,106	\$16,557	\$17,053
[4]	2/16/2017	\$17,192	\$16,702		\$16,944	\$17,051	\$16,560	\$17,145	\$17,045		\$17,135	\$17,132	\$17,001	\$16,973	\$17,022	\$17,106	\$16,557	\$17,053
[5]	2/22/2017	\$17,192	\$16,702		\$16,944	\$17,051	\$16,560	\$17,145	\$17,045		\$17,135		\$17,001	\$16,973	\$17,022	\$17,106	\$16,557	\$17,053
[6]	2/24/2017	\$17,056	\$16,702		\$16,944	\$17,051	\$16,560	\$17,145	\$17,045		\$17,135		\$17,001	\$16,973	\$17,022	\$17,106	\$16,557	\$17,053
[7]	2/28/2017	\$17,056	\$16,702	\$16,650	\$16,944	\$17,051	\$16,560	\$17,145	\$17,045		\$17,135		\$17,001	\$16,973	\$17,022	\$17,106	\$16,557	\$17,053
[8]	3/29/2017	\$17,056	\$16,702	\$16,650	\$16,944	\$17,051	\$16,560	\$17,145	\$17,045		\$17,135	\$17,132	\$17,001	\$16,973	\$17,022	\$17,106	\$16,557	\$17,053
[9]	5/2/2017	\$17,056	\$16,702	\$16,650	\$16,944	\$17,051	\$16,560	\$17,145	\$17,045		\$17,135	\$17,132	\$17,001	\$16,973	\$17,022	\$17,106	\$17,080	\$17,053
[10]	5/3/2017	\$17,056	\$16,702	\$16,650	\$16,944	\$17,051	\$16,560	\$17,145	\$17,045		\$17,135	\$17,132	\$17,001	\$16,973	\$17,022	\$17,106	\$17,080	\$17,053
[11]	5/4/2017	\$17,056	\$16,608	\$16,650	\$16,844	\$16,661	\$16,429	\$17,145	\$17,045	\$16,523	\$17,135	\$17,132	\$16,398	\$16,489	\$16,510	\$16,712	\$16,305	\$16,432
[12]	5/5/2017	\$17,056	\$16,608	\$16,650	\$16,844	\$16,661	\$16,429	\$16,447	\$16,520	\$16,523	\$17,135	\$17,132	\$16,398	\$16,489	\$16,510	\$16,712	\$16,305	\$16,432
[13]	5/11/2017	\$17,056	\$16,608	\$16,650	\$16,844	\$16,661	\$16,429	\$16,447	\$16,520	\$16,523	\$16,660	\$17,132	\$16,398	\$16,489	\$16,510	\$16,712	\$16,305	\$16,432
[14]	5/17/2017	\$17,056	\$16,608	\$16,650	\$16,844	\$16,661	\$16,429	\$16,447	\$16,520	\$16,523	\$16,660	\$16,589	\$16,398	\$16,489	\$16,510	\$16,712	\$16,305	\$16,432
[15]	6/16/2017	\$17,056	\$16,608	\$16,369	\$16,844	\$16,661	\$16,429	\$16,447	\$16,520	\$16,523	\$16,660	\$16,589	\$16,398	\$16,489	\$16,510	\$16,712	\$16,305	\$16,432
[16]	6/19/2017	\$16,422	\$16,608	\$16,369	\$16,844	\$16,661	\$16,429	\$16,447	\$16,520	\$16,523	\$16,660	\$16,589	\$16,398	\$16,489	\$16,510	\$16,712	\$16,305	\$16,432
[17]	6/29/2017	\$16,422	\$16,608	\$16,369	\$16,844	\$16,661	\$16,429	\$16,447	\$16,520	\$16,523	\$16,660	\$16,589	\$16,398	\$16,489	\$16,510	\$16,574	\$18,362	\$16,432
[18]	7/5/2017	\$16,422	\$16,608	\$16,369	\$16,844	\$16,661	\$16,429	\$16,447	\$16,520	\$16,523	\$16,660	\$16,589	\$16,398	\$16,489	\$16,510	\$16,574	\$18,362	\$16,432
[19]	7/10/2017	\$16,422	\$16,608	\$16,369	\$18,492	\$16,661	\$16,429	\$16,447	\$16,520	\$16,523	\$16,660	\$16,589	\$16,398	\$16,489	\$16,510	\$16,574	\$18,362	\$16,432
[20]	7/11/2017	\$16,422	\$16,608	\$16,369	\$18,492	\$16,661	\$16,429	\$16,447	\$16,520	\$16,523	\$16,660	\$16,589	\$16,398	\$16,489	\$16,510	\$16,574	\$18,362	\$16,432
[21]	7/12/2017	\$16,422	\$16,608	\$16,369	\$18,330	\$16,498	\$16,429	\$16,447	\$16,520	\$16,523	\$16,660	\$16,589	\$16,398	\$16,489	\$16,510	\$16,574	\$18,362	\$16,432
[22]	7/13/2017	\$16,422	\$16,608	\$16,369	\$18,330	\$16,498	\$16,429	\$16,447	\$16,520	\$16,523	\$16,660	\$16,589	\$16,398	\$16,489	\$16,501	\$16,574	\$18,362	\$16,432
[23]	7/17/2017	\$16,422	\$16,608	\$16,369	\$18,330	\$16,498	\$16,429	\$16,447	\$16,520	\$16,523	\$16,660	\$16,589	\$16,393	\$16,489	\$16,501	\$16,574	\$18,362	\$16,432
[24]	7/19/2017	\$16,422	\$16,608	\$16,369	\$18,330	\$16,498	\$16,429	\$16,447	\$16,520	\$16,523	\$16,660	\$16,627	\$16,393	\$16,489	\$16,501	\$16,574	\$18,362	\$16,432
[25]	7/31/2017	\$16,422	\$16,608	\$16,369	\$18,330	\$16,498	\$16,429	\$16,447	\$16,520	\$16,523	\$16,660	\$16,627	\$16,393	\$16,489	\$16,501	\$16,574	\$18,362	\$16,432
[26]	8/2/2017	\$16,422	\$16,608	\$16,369	\$18,330	\$16,498	\$16,429	\$16,447	\$16,432	\$16,510	\$16,660	\$16,627	\$16,393	\$16,489	\$16,501	\$16,574	\$18,362	\$16,432
[27]	8/3/2017	\$16,422	\$16,439	\$16,369	\$18,177	\$16,510	\$16,419	\$16,447	\$16,432	\$16,451	\$16,660	\$16,627	\$16,424	\$16,434	\$16,401	\$16,432	\$18,481	\$16,330
[28]	8/4/2017	\$16,422	\$16,439	\$16,369	\$18,177	\$16,510	\$16,419	\$16,447	\$16,432	\$16,451	\$16,660	\$16,627	\$16,424	\$16,434	\$16,401	\$16,432	\$18,481	\$16,330
[29]	8/6/2017	\$16,422	\$16,439	\$16,369	\$18,177	\$16,510	\$16,419	\$16,447	\$16,432	\$16,451	\$16,416	\$16,627	\$16,424	\$16,434	\$16,401	\$16,432	\$18,481	\$16,330
[30]	8/7/2017	\$16,422	\$16,439	\$16,369	\$18,177	\$16,510	\$16,419	\$16,448	\$16,432	\$16,451	\$16,416	\$16,627	\$16,424	\$16,434	\$16,401	\$16,432	\$18,481	\$16,330
[31]	8/23/2017	\$16,424	\$16,439	\$16,369	\$18,177	\$16,510	\$16,419	\$16,448	\$16,432	\$16,451	\$16,416		\$16,424	\$16,434	\$16,401	\$16,432	\$18,481	\$16,330
[32]	9/5/2017	\$16,424	\$16,439	\$16,390	\$18,177	\$16,510	\$16,419	\$16,448	\$16,432	\$16,451	\$16,416		\$16,424	\$16,434	\$16,401	\$16,432	\$18,481	\$16,330
[33]	9/11/2017	\$16,424	\$16,439	\$16,390	\$18,177	\$16,510	\$16,419	\$16,448	\$16,432	\$16,451	\$16,416		\$16,424	\$16,434	\$16,401	\$16,432	\$18,481	
[34]	9/13/2017	\$16,424	\$16,353	\$16,390	\$18,177	\$16,510	\$16,419	\$16,448	\$16,432	\$16,451	\$16,416		\$16,424	\$16,434	\$16,401	\$16,432	\$18,481	
[35]	9/15/2017	\$16,424	\$16,353	\$16,390	\$18,403	\$16,510	\$16,419	\$16,448	\$16,432	\$16,451	\$16,416		\$16,424	\$16,434	\$16,401	\$16,432	\$18,481	
[36]	10/4/2017	\$16,424	\$16,353	\$16,390	\$18,403	\$16,510	\$16,419	\$16,448	\$16,432	\$16,451	\$16,416		\$16,424	\$16,434	\$16,401	\$16,353	\$18,481	
[37]	10/5/2017	\$16,424	\$16,377	\$16,390	\$18,403	\$16,510	\$16,419	\$16,448	\$16,432	\$16,451	\$16,416		\$16,424	\$16,434	\$16,401	\$16,353	\$18,481	
[38]	10/6/2017	\$16,424	\$16,377	\$16,390	\$18,403	\$16,438	\$16,419	\$16,448	\$16,432	\$16,451	\$16,416		\$16,424	\$16,434	\$16,401	\$16,353	\$18,481	
[39]	10/10/2017	\$16,424	\$16,377	\$16,390	\$18,403	\$16,438	\$16,419	\$16,448	\$16,432	\$16,451	\$16,416		\$16,424	\$16,434	\$16,396	\$16,353	\$18,481	
[40]	10/12/2017	\$16,424	\$16,377	\$16,390	\$18,403	\$16,438	\$16,419	\$16,448	\$16,428	\$16,451	\$16,416		\$16,424	\$16,434	\$16,396	\$16,353	\$18,481	
[41]	10/18/2017	\$16,424	\$16,377	\$16,390	\$18,403	\$16,438	\$16,419	\$16,448	\$16,428	\$16,451	\$16,416		\$16,424	\$16,434	\$16,396	\$16,353	\$18,502	
[42]	10/20/2017	\$16,424	\$16,377	\$16,390	\$17,720	\$16,438	\$16,419	\$16,448	\$16,428	\$16,451	\$16,416		\$16,424	\$16,434	\$16,396	\$16,353	\$18,502	

EXHIBIT 25
ANNUAL REVENUE FORECASTS FROM EQUITY ANALYSTS' REPORTS (CTL)
FY 2017

		Broker Name Publicly Disclosed								Broker Name Listed Only by Contributor #								
		Gabelli	Macquarie	MoffettNathanson	Morningstar	Oppenheimer	Raymond James	SunTrust	Wells Fargo	1120	17472	23816	32	36928	392	398136	696	73704
		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P]	[Q]
[43]	10/25/2017	\$16,424	\$16,377	\$16,390	\$17,720	\$16,438	\$16,419	\$16,448	\$16,428	\$16,429	\$16,416		\$16,424	\$16,434	\$16,396	\$16,353	\$18,502	
[44]	11/7/2017	\$16,424	\$16,377	\$16,390	\$17,720	\$16,438	\$16,419	\$16,448	\$16,428	\$16,429	\$16,416	\$16,424	\$16,424	\$16,434	\$16,396	\$16,353	\$18,502	
[45]	11/8/2017	\$16,424	\$16,377	\$16,390	\$17,720	\$16,396	\$16,419	\$16,448	\$16,428	\$16,429	\$16,416	\$16,424	\$16,424	\$16,434	\$16,396	\$16,353	\$18,427	
[46]	11/9/2017	\$16,424	\$17,743	\$16,390		\$24,592	\$17,720	\$16,384	\$16,428	\$18,308	\$16,416	\$16,424	\$16,424	\$24,142	\$17,674	\$16,327	\$18,427	\$16,330
[47]	11/10/2017	\$16,424	\$17,743	\$16,390		\$24,592	\$17,720	\$16,384	\$16,428	\$18,308	\$16,416	\$16,424	\$18,381	\$24,142	\$17,674	\$16,327	\$18,427	\$16,330
[48]	11/13/2017	\$16,424	\$17,743	\$16,390		\$24,592	\$17,720	\$16,384	\$17,786	\$18,308	\$16,416	\$16,424	\$18,381	\$24,142	\$17,674	\$16,327	\$18,427	\$16,330
[49]	11/16/2017	\$16,424	\$17,743	\$16,390		\$24,592	\$17,720	\$16,384	\$17,786	\$18,308	\$17,654	\$16,424	\$18,381	\$24,142	\$17,674	\$16,327	\$18,427	\$16,330
[50]	11/28/2017	\$17,715	\$17,743	\$17,654		\$24,592	\$17,720	\$16,384	\$17,786	\$18,308	\$17,654	\$16,424	\$18,381	\$24,142	\$17,674	\$16,327	\$18,427	\$16,330
[51]	12/13/2017	\$17,715	\$17,743	\$17,654		\$24,592	\$17,720	\$16,384	\$17,786	\$18,308	\$17,654	\$17,665	\$18,381	\$24,142	\$17,674	\$16,327	\$18,427	\$16,330
[52]	1/8/2018	\$17,715	\$17,743	\$17,654		\$24,592	\$17,720	\$16,384	\$17,786	\$18,308	\$17,654	\$17,665	\$18,381	\$24,142	\$17,674	\$16,327	\$18,427	\$18,282
[53]	1/17/2018	\$17,715	\$17,743	\$17,654		\$24,592	\$17,720	\$16,384	\$17,786	\$18,308	\$17,654	\$17,665	\$18,381	\$24,142	\$17,674	\$17,699	\$18,427	\$18,282
[54]	1/18/2018	\$17,715	\$17,743	\$17,654		\$24,592	\$17,720	\$16,384	\$17,786	\$18,305	\$17,654	\$17,665	\$18,316	\$24,142	\$17,674	\$17,699	\$18,427	\$18,282
[55]	1/24/2018	\$17,715	\$17,743	\$17,654		\$24,592	\$17,720	\$16,384	\$17,786	\$18,305	\$17,684	\$17,665	\$18,316	\$24,142	\$17,674	\$17,699	\$18,427	\$18,282
[56]	2/5/2018	\$17,715	\$17,743	\$17,654		\$24,592	\$17,720	\$16,384	\$17,786	\$18,305	\$17,684	\$17,665	\$18,316	\$24,142	\$17,674	\$17,699	\$18,377	\$18,282
[57]	2/12/2018	\$17,715	\$17,743	\$17,654		\$24,592	\$17,720	\$16,384	\$17,786	\$18,305	\$17,684	\$17,669	\$18,316	\$24,142	\$17,674	\$17,699	\$18,377	\$18,282
[58]	2/14/2018	\$17,715	\$17,743	\$17,654		\$24,592	\$17,720	\$16,384	\$17,786	\$18,305	\$17,684	\$17,669	\$18,316	\$24,142	\$17,674	\$17,699	\$18,377	\$18,282

Notes and sources:

- [1] Revenue forecasts for ticker CTL from Thomson Reuters Eikon, as of March 18, 2020. I collected forecast data from February 8, 2017 (the earnings release date for 2016 full-year financial results) through February 14, 2018 (the earnings release date for 2017 full-year financial results). Forecasts are in \$ millions USD.
- [2] Blanks indicate unavailable data. Blue shading highlights dates of CenturyLink's quarterly/annual earnings releases and 10-Q and 10-K filings (see Exhibit 37), investor conferences at which alleged false and misleading statements were made (see Exhibit 18A) and curative disclosure dates (June 16, June 19 and July 12, 2017).
- [3] Contributors [I] - [Q] provided estimate to Thomson Reuters Eikon, but chose not to disclose their identity publicly.
- [4] Only displays dates on which at least one broker revised its revenue forecast (by at least one-thousand) or discontinued / submitted a revenue forecast after a break in reporting. Dates presented are the days the brokers released the analysts' reports. Thomson Reuters Eikon typically receives the data from these reports one trading day after the release. I subtract one trading day from dates from Thomson Reuters Eikon data to correct for this delay. Weekends and the nine holidays observed by NYSE non-trading days are taken into account.
- [5] Numbers in red highlight revenue forecasts that have been revised down. Numbers in green highlight revenue forecasts that have been revised up.
- [6] Curative disclosure dates (June 16, June 19, and July 12, 2017) are from the Complaint.

EXHIBIT 26A
ABNORMAL RETURNS
ON THE THREE ALLEGED CURATIVE DISCLOSURE DATES
Deal vs. Hartzmark Model

	<i>Hartzmark Model</i>			<i>Deal Model</i>		
	<u>June 16, 2017</u>	<u>June 19, 2017</u>	<u>July 12, 2017</u>	<u>June 16, 2017</u>	<u>June 19, 2017</u>	<u>July 12, 2017</u>
Abnormal Return (AR)	-4.8%	-2.3%	-4.2%	-5.1%	-0.8%	-3.6%
<i>t</i> -stat	(-3.96)	(-1.89)	(-3.46)	(-4.54)	(-0.68)	(-2.96)
p-values	0.000	0.061	0.001	0.000	0.499	0.004

Notes and Sources:

See Footnote to Exhibit 26B for a description of the differences between the Deal Model and the Hartzmark Model.

EXHIBIT 26B
EVENT STUDY: ABNORMAL RETURN
ON THE THREE ALLEGED CURATIVE DISCLOSURE DAYS
Deal Model

	Event Date		
	16-Jun-17	19-Jun-17	12-Jul-17
	[A]	[B]	[C]
R_M	1.225*** (5.164)	1.240*** (4.826)	0.989*** (3.997)
R_{IND}	0.882*** (8.561)	0.876*** (7.762)	0.849*** (7.004)
Constant	0.001 (0.655)	0.000 (0.203)	-0.001 (-0.822)
N	120	120	120
Adj. R ²	0.452	0.407	0.346
Abnormal Return (AR)	-5.1%	-0.8%	-3.6%
<i>t</i> -stat	(-4.54)	(-0.68)	(-2.96)

EXHIBIT 26B
EVENT STUDY: ABNORMAL RETURN
ON THE THREE ALLEGED CURATIVE DISCLOSURE DAYS
Deal Model

Notes and Sources:

The Deal Model regression specification uses the DJSTEL Index as the industry index and estimates the industry residual return over a rolling 120-days window ending the day before the event date. It does not exclude earnings announcement days from the estimation window. In all other respects, it is identical to Dr. Hartzmark's event study model.

Model:

$$R_{it} = \alpha + \beta_1 R_{Mt} + \beta_2 R_{INDt} + \varepsilon_{it}$$

Estimation period:

120 days ending one day before event date.

***, **, *

Statistical significance at 99, 95 and 90 percent levels, respectively.

t-stats are in parentheses below the coefficient estimates.

R_M

Daily returns on the market index, which is the S&P500 Index. Daily returns include all distributions.

R_{IND}

Industry index returns are residuals from a regression of the industry index on the market index. This captures the variation in the industry index return that is uncorrelated with the market index return. The industry index used here is value-weighted Dow Jones Select Telecom (DJSTEL) Index. CTL daily returns are excluded from the industry index returns. This set of regressions uses a rolling window method (120 trading days before event date) to obtain industry excess return.

AR

Abnormal Return, which equals actual daily return *less* the return predicted by the model on the alleged curative disclosure date.

Stock and index data are from Bloomberg.

EXHIBIT 27A
MODEL FIT AND ABNORMAL RETURNS
WITH ALTERNATE INDUSTRY INDICES

Regressions for June 16, 2017

	Hartzmark Report	Industry Index Using Deal Methodology					
		SPTRSC50	S5TELS	S5DIVT	S15DIVT	S15ALTC	DJSTEL
		Hartzmark Index	Hartzmark Considered	Hartzmark Considered	Hartzmark Considered	Hartzmark Considered	Deal Index
	[A]	[B]	[C]	[D]	[E]	[F]	[G]
R_M		1.225*** (4.288)	1.225*** (4.254)	1.225*** (4.254)	1.225*** (4.282)	1.225*** (20.05)	1.225*** (5.164)
R_{IND}		0.663*** (3.763)	0.613*** (3.478)	0.613*** (3.480)	0.656*** (3.722)	1.585*** (52.46)	0.882*** (8.561)
Constant		0.001 (0.544)	0.001 (0.539)	0.001 (0.539)	0.001 (0.543)	0.001** (2.542)	0.001 (0.655)
N		120	120	120	120	120	120
Adj. R ²		0.204	0.192	0.192	0.202	0.964	0.452
Abnormal Return (AR)		-4.8% -4.8%	-4.7%	-4.7%	-4.8%	-0.9%	-5.1%
<i>t</i> -stat		(-3.96) (-3.55)	(-3.50)	(-3.49)	(-3.54)	(-2.87)	(-4.54)

EXHIBIT 27A
MODEL FIT AND ABNORMAL RETURNS
WITH ALTERNATE INDUSTRY INDICES

Regressions for June 16, 2017

In columns [B]-[G], the regression specification follows the Deal Model except for the use of alternate industry indices. Dr. Hartzmark chose [B] SPTRSC50 as main specification and [C]-[F] as alternatives but did not consider [G] DJSTEL in his report.

Model: $R_{it} = \alpha + \beta_1 R_{Mt} + \beta_2 R_{INDt} + \varepsilon_{it}$

Estimation period: 120 days ending one day before event date.
 ***, **, * Statistical significance at 99, 95 and 90 percent levels, respectively.
 t-stats are in parentheses below the coefficient estimates.

R_M	Daily returns on the market index, which is the S&P500 Index. Daily returns include all distributions.
R_{IND}	Industry index return variables are residuals from a regression of the corresponding industry index on the market index. This captures the variation in the industry index return that is orthogonal to the market index return. Industry indices used in the indicated columns are: [B] S&P Composite 1500 Communication Services Index (SPTRSC50, Plaintiff's index choice); [C] S&P 500 Communication Services Sector Index (S5TELS); [D] S&P 500 Diversified Telecom Services Industry GICS Level 3 Index (S5DIVT); [E] S&P Supercomposite Diversified Telecom Services Industry GICS Level 3 Index (S15DIVT); [F] S&P Supercomposite Alternative Carriers Sub Industry Index (S15ALTC); [G] value-weighted Dow Jones Select Telecom Index (DJSTEL). CTL return was excluded from all industry indices.
AR	Abnormal Return, which equals actual daily return on CenturyLink stock <i>less</i> the return predicted by the model on the alleged curative disclosure date.

Stock and index data are from Bloomberg. Daily weights on CTL stock in each of the industry index (except the DJSTEL index) are from Hartzmark Report production. Daily weights on CTL stock in the DJSTEL index are from Bloomberg.

EXHIBIT 27B
MODEL FIT AND ABNORMAL RETURNS
WITH ALTERNATE INDUSTRY INDICES

Regressions for June 19, 2017

Hartzmark Report	Industry Index Using Deal Methodology					
	SPTRSC50	S5TELS	S5DIVT	S15DIVT	S15ALTC	DJSTEL
	Hartzmark Index	Hartzmark Considered	Hartzmark Considered	Hartzmark Considered	Hartzmark Considered	Deal Index
[A]	[B]	[C]	[D]	[E]	[F]	[G]
R_M	1.240*** (4.119)	1.240*** (4.092)	1.240*** (4.093)	1.240*** (4.115)	1.240*** (19.63)	1.240*** (4.826)
R_{IND}	0.654*** (3.483)	0.606*** (3.232)	0.606*** (3.236)	0.646*** (3.444)	1.607*** (53.05)	0.876*** (7.762)
Constant	0.000 (0.173)	0.000 (0.172)	0.000 (0.172)	0.000 (0.173)	0.000 (0.826)	0.000 (0.203)
N	120	120	120	120	120	120
Adj. R^2	0.186	0.175	0.175	0.184	0.964	0.407
Abnormal Return (AR)	-2.3%	-2.2%	-2.2%	-2.2%	0.4%	-0.8%
t -stat	(-1.89)	(-1.50)	(-1.53)	(-1.54)	(1.22)	(-0.68)

Notes and Sources:

See Exhibit 27A for model and variable descriptions.

EXHIBIT 27C
MODEL FIT AND ABNORMAL RETURNS
WITH ALTERNATE INDUSTRY INDICES

Regressions for July 12, 2017

Hartzmark Report	Industry Index Using Deal Methodology					
	SPTRSC50	S5TELS	S5DIVT	S15DIVT	S15ALTC	DJSTEL
	Hartzmark Index	Hartzmark Considered	Hartzmark Considered	Hartzmark Considered	Hartzmark Considered	Deal Index
[A]	[B]	[C]	[D]	[E]	[F]	[G]
R_M	0.989*** (3.470)	0.989*** (3.450)	0.989*** (3.451)	0.989*** (3.467)	0.989*** (16.72)	0.989*** (3.997)
R_{IND}	0.549*** (2.859)	0.497** (2.599)	0.498** (2.603)	0.541*** (2.822)	1.631*** (52.81)	0.849*** (7.004)
Constant	-0.001 (-0.713)	-0.001 (-0.709)	-0.001 (-0.709)	-0.001 (-0.713)	-0.001 (-3.437)	-0.001 (-0.822)
N	120	120	120	120	120	120
Adj. R^2	0.133	0.123	0.123	0.131	0.963	0.346
Abnormal Return (AR)	-4.2%	-4.1%	-4.0%	-4.1%	-1.2%	-3.6%
t -stat	(-3.46)	(-2.85)	(-2.83)	(-2.85)	(-3.91)	(-2.96)

Notes and Sources:

See Exhibit 27A for model and variable description.

EXHIBIT 28
CENTURYLINK PEERS IDENTIFIED FROM DIFFERENT SOURCES

Company	CenturyLink	DJSTEL	SPTRSC50	Morgan Stanley		Macquarie		CFRA		MorningStar	
	Proxy	Index	Index	2013	2017	2013	2017	2013	2017	2013	2017
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
[1] Alaska Communications Systems Group								x	x		
[2] Alteva								x			
[3] American Tower				x	x						
[4] AT&T Inc.	x	x	x	x	x	x	x			x	x
[5] ATN International Inc.		x	x								
[6] BCE Inc.				x	x						
[7] Cablevision Systems Corporation	x										
[8] Ciena Corporation	x										
[9] Cincinnati Bell Inc.	x	x	x	x	x			x	x		
[10] Clearwire Corporation				x							
[11] Cogent Communications Holdings, Inc.	x		x								
[12] Comcast Corporation	x									x	x
[13] Consolidated Communications Holdings Inc.	x	x	x					x	x		
[14] Crown Castle International Corp.	x			x	x						
[15] CyrusOne Inc.				x	x	x					
[16] Dish Network Corp.	x										
[17] Equinix				x	x	x					
[18] Finisar Corp.	x										
[19] Frontier Communications Corporation	x	x	x	x	x		x	x	x		
[20] General Communication Inc. (GCI)	x	x	x								
[21] Globalstar Inc.		x									
[22] GOGO					x						
[23] Hickory Tech								x			
[24] IDT Corporation	x										
[25] Inteliquent				x							
[26] Intelstat					x						
[27] InterXion Holding N.V.						x					
[28] Iridium Communications Inc.		x	x								
[29] JDS Uniphase Corporation	x										
[30] Leap Wireless				x							
[31] Level 3 Communications Inc.	x	x	x	x	x	x	x				
[32] Liberty Global plc	x										
[33] Lumos Networks Corp.			x								
[34] MetroPCS Communications				x							
[35] Motorola Solutions, Inc.	x										
[36] Orbcomm Inc.		x									
[37] QTS Realty Trust Inc					x						
[38] Rackspace Hosting, Inc.	x			x		x					
[39] Rogers Communications Inc.				x	x						
[40] SBA Communications				x	x						
[41] Shenandoah Telecommunications Co.		x									
[42] Sirius XM Holdings Inc.	x										
[43] Spok Holdings Inc.	x	x	x								

EXHIBIT 28
CENTURYLINK PEERS IDENTIFIED FROM DIFFERENT SOURCES

Company	CenturyLink	DJSTEL	SPTRSC50	Morgan Stanley		Macquarie		CFRA		MorningStar	
	Proxy	Index	Index	2013	2017	2013	2017	2013	2017	2013	2017
[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]
[44] Sprint Corporation	x	x		x	x	x				x	x
[45] Telephone & Data Systems Inc.	x			x	x						
[46] TELUS Corp.				x	x						
[47] Time Warner Cable Inc.										x	
[48] T-Mobile US Inc.		x			x	x	x				
[49] TW Telecom				x		x					
[50] Uniti Group Inc					x						
[51] US Cellular Corp.	x	x		x	x						
[52] Verizon Communications Inc.	x	x	x	x	x	x	x			x	x
[53] Viacom, Inc.	x										
[54] Vonage Holdings Corp.		x									
[55] Windstream Holdings Inc.	x	x	x	x	x			x	x		
[56] Zayo					x						
Total	26	18	13	23	23	10	5	7	5	5	4

Notes:

- [1] Firms in the DJSTEL and SPTRSC50 Index are those that belonged to the respective index in the period between the alleged curative disclosure dates of June 16, 2017 and July 12, 2017.
- [2] Blue highlighting includes firms only in the DJSTEL Index, grey includes firms only in the SPTRSC50 Index, and yellow includes firms in both DJSTEL and SPTRSC50 Indices.
- [3] Index membership and firm names for DJSTEL and SPTRSC50 are from Bloomberg as of the end of 2016.
- [4] I identified reports from brokerage firms that (a) had issued reports within two months of the beginning of the class period (March 2013) and in June or July of 2017 (corresponding with the curative disclosure dates), and (b) had issued reports that contained a list of CTL peers.

Sources:

- [B] CenturyLink Total Shareholder Return (TSR) Peer Group for Performance Benchmarking identified in "CenturyLink 2016 Notice of Annual Meeting and Proxy Statement and Annual Financial Report," p. 56, available at https://www.sec.gov/Archives/edgar/data/18926/000119312516530742/d129154ddef14a.htm#toc129154_20.
- [C] Constituent firms of the Dow Jones Select Telecom Index (DJSTEL) Index, from *Bloomberg*.
- [D] Constituent firms of the S&P Composite 1500 Telecommunications Services Total Return Index (SPTRSC50), from *Bloomberg*.
- [E] Morgan Stanley, *CenturyLink, Inc. 4Q Review: Surprise Dividend Cut, But Yield & Buybacks Remain Attractive*, February 14, 2013, pages 2 and 17.
- [F] Morgan Stanley, *CenturyLink Lawsuit Raises Questions but Precedents Suggest Limited Impact*, June 19, 2017, page 8.
- [G] Macquarie, *CenturyLink: You can't escape your roots; secular wireline pressures drive an unexpected dividend cut; downgrading to UP*, February 14, 2013, pages 4 and 5.
- [H] Macquarie, *CenturyLink: Changing its Stripes... Very Slowly*, May 3, 2017, page 5.
- [I] CFRA Equity Research, *CenturyLink*, February 19, 2013, page 4.
- [J] CFRA Equity Research, *CenturyLink*, June 16, 2017, page 4.
- [K] Morningstar Equity Research, *CenturyLink's reduced dividend doesn't materially change our view of the firm*, February 27, 2013, page 16.
- [L] Morningstar Equity Research, *CenturyLink Sued by Minnesota Attorney General on Overbilling Customers; Cutting FVE to \$30*, July 13, 2017, page 18.

EXHIBIT 29A
COMPARISON OF DJSTEL AND SPTRSC50 INDICES: SUMMARY

	DJSTEL	SPTRSC50
	[A]	[B]
Number of Firms	20	14
Median Sales	\$2,562	\$1,060
Median Market Cap	\$1,624	\$1,620
Number of 3-digit SICs	2	2
Number of other firms with CTL's 3-digit SIC	15	11

Notes and Sources:

[1] \$ in Millions.

[2] DJSTEL is the Dow Jones Select Telecom index.

[3] SPTRSC50 is the S&P Composite 1500 Telecommunication Services total return index.

[4] Index membership and firm names from *Bloomberg*.

[5] Firms listed are those that belonged to at least one index between the alleged curative disclosure dates of June 16, 2017 and July 12, 2017.

[6] Data for market capitalization, sales, and SIC Codes from Computstat.

[7] Market capitalization computed as shares outstanding at end of 2016 times share price at end of 2016.

[8] SIC (Standard Industrial Classification) Codes are historical values.

EXHIBIT 29B
COMPARISON OF INDEX CONSTITUENT FIRMS: DJSTEL AND SPTRSC50

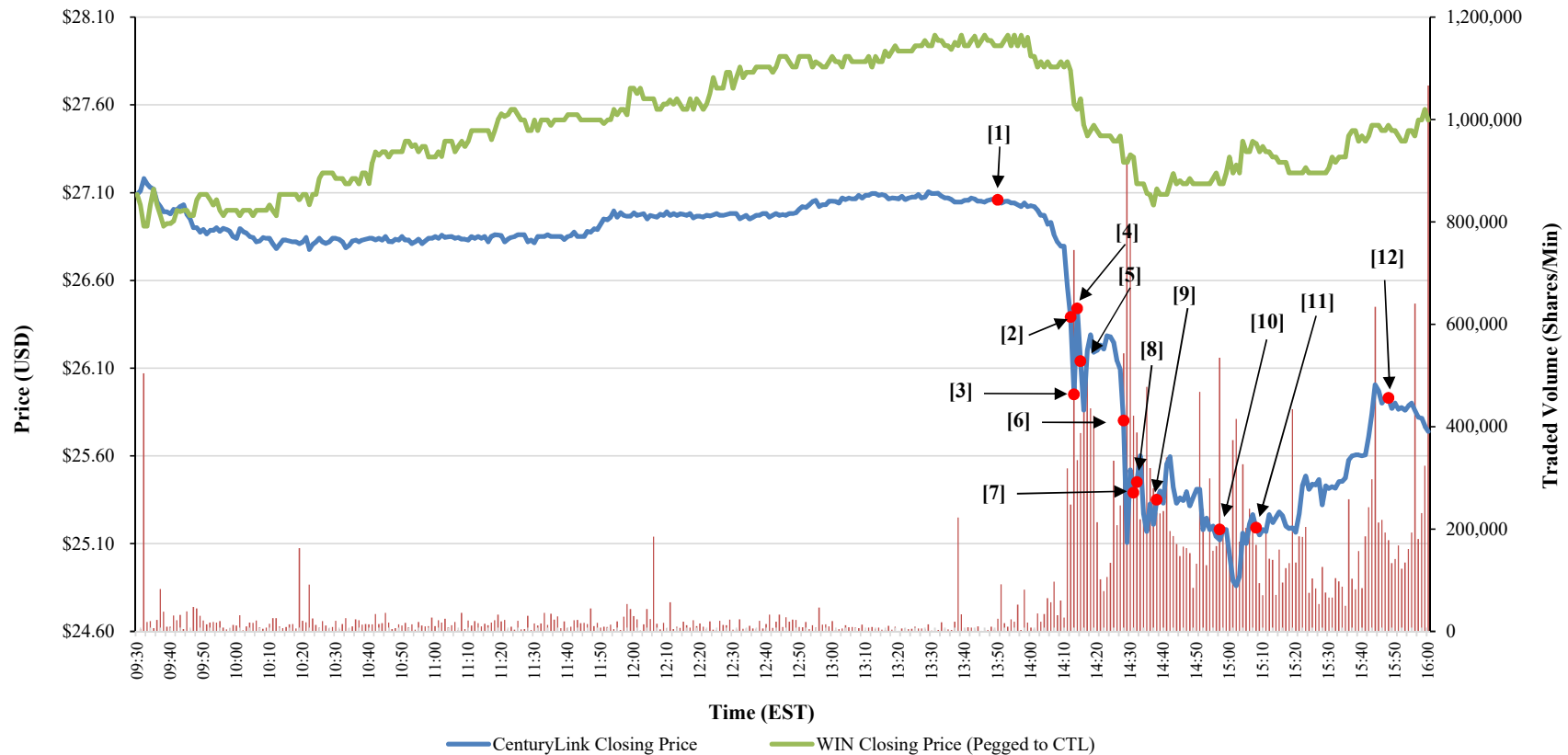
	Market Cap. (\$MM)	Sales (\$MM)	3-digit SIC Code
	[A]	[B]	[C]
Firms in both DJSTEL and SPTRSC50			
[1] AT&T INC	\$261,091	\$163,763	481
[2] ATN INTERNATIONAL INC	1,293	457	481
[3] CENTURYLINK INC	12,997	17,470	481
[4] CINCINNATI BELL INC	940	1,186	481
[5] CONSOLIDATED COMM HLDGS INC	1,359	743	481
[6] FRONTIER COMMUNICATIONS CORP	3,963	8,896	481
[7] GCI LIBERTY INC -OLD	696	934	481
[8] IRIDIUM COMMUNICATIONS INC	920	434	489
[9] LEVEL 3 COMMUNICATIONS INC	20,291	8,172	481
[10] SPOK HOLDINGS INC	426	180	481
[11] TELEPHONE & DATA SYSTEMS INC	3,176	5,102	481
[12] VERIZON COMMUNICATIONS INC	217,613	125,980	481
Number of Firms	12		
Average	\$43,731	\$27,776	
Firms in DJSTEL, but not SPTRSC50			
[1] GLOBALSTAR INC	\$1,748	\$97	489
[2] ORBCOMM INC	588	187	489
[3] SHENANDOAH TELECOMMUN CO	1,336	535	481
[4] SPRINT CORP	34,625	33,347	481
[5] T-MOBILE US INC	47,524	37,242	481
[6] US CELLULAR CORP	3,716	3,939	481
[7] VONAGE HOLDINGS CORP	1,500	956	489
[8] WINDSTREAM HOLDINGS INC	706	5,387	481
Number of Firms	8		
Average	\$11,468	\$10,211	
Firms in SPTRSC50, but not DJSTEL			
[1] COGENT COMMUNICATIONS HLDGS	\$1,881	\$447	481
[2] LUMOS NETWORKS CORP	369	207	489
Number of Firms	2		
Average	\$1,125	\$327	

Notes and Sources:

[1] \$ in Millions.

[2] See Exhibit 29A for variable definitions.

EXHIBIT 30A
CENTURYLINK, INC.
INTRADAY TRADE PRICES
June 16, 2017



Notes & Sources:

- [1] By-minute prices are from TickData for regular trading hours.
- [2] Red data points indicate a published news story or analyst report. See Exhibit 30B for more information.
- [3] Numbers in brackets refer to specific stories or reports that are detailed in Exhibit 30B. While Exhibit 30B lists 17 stories, only the first 12 are included here; the other 5 were either published after market close or do not contain time stamps.

EXHIBIT 30B
CENTURYLINK NEWS STORIES AND ANALYST REPORTS
June 16, 2017

	Time Stamp		Source	Headline	Description
	Date	(E.T.)			
	[A]	[B]	[C]	[D]	[E]
[1]	6/16/17	13:50	Bloomberg News	<i>CenturyLink Is Accused of Running a Wells Fargo-Like Scheme</i>	"A former employee alleges she lost her job after raising concerns about fraudulent billings."
[2]	6/16/17	14:12	Bloomberg News	<i>CenturyLink Shares Drop 4%; Utilities Index Little Changed</i>	"(Bloomberg) -- CenturyLink Inc. fell 4.1 percent, the biggest move since May 4, compared with end-of-day price changes, while its industry group was little changed."
[3]	6/16/17	14:13	Theflyonthewall.com	<i>14:13 EDT CenturyLink accused by employee of Wells Fargo-like scheme, Bloomberg...</i>	"CenturyLink accused by employee of Wells Fargo-like scheme, Bloomberg reports A former employee filed a lawsuit in Arizona state superior court claiming she was fired by CenturyLink after accusing the company of charging customers ..."
[4]	6/16/17	14:14	Bloomberg First Word	<i>CENTURY LINK, LEVEL 3 QUICKLY FALL TO SESSION LOW</i>	--
[5]	6/16/17	14:15	Bloomberg News	<i>Level 3 Falls 3%; Trading Volume More Than Doubles</i>	"(Bloomberg) -- Level 3 Communications Inc. fell 3 percent, the biggest move since May 4, compared with end-of-day price changes, while its industry group was little changed."
[6]	6/16/17	14:28	Theflyonthewall.com	<i>14:28 EDT CenturyLink drops 6% after lawsuit accuses of Well Fargo-like scheme</i>	"CenturyLink drops 6% after lawsuit accuses of Well Fargo-like scheme"
[7]	6/16/17	14:31	Theflyonthewall.com	<i>14:31 EDT Level 3 follows CenturyLink lower, drops 4% to \$61.53</i>	"Level 3 follows CenturyLink lower, drops 4% to \$61.53"
[8]	6/16/17	14:32	Theflyonthewall.com	<i>14:32 EDT Technical View: CenturyLink trades sharply lowerThe shares have spiked...</i>	"Technical View: CenturyLink trades sharply lowerThe shares have spiked lower, last down over 5.8% to \$25.35. At that price next support is at \$24.59. Resistance is at \$25.93. The drop follows a report from Bloomberg that a former ..."

EXHIBIT 30B
CENTURYLINK NEWS STORIES AND ANALYST REPORTS
June 16, 2017

	Time Stamp		Source	Headline	Description
	Date	(E.T.)			
	[A]	[B]	[C]	[D]	[E]
[9]	6/16/17	14:38	Theflyonthewall.com	<i>14:38 EDT CenturyLink, Level 3 slide after report of whistleblower lawsuitShares...</i>	"CenturyLink, Level 3 slide after report of whistleblower lawsuitShares of CenturyLink (CTL) are dropping in afternoon trading after Bloomberg brought to light a lawsuit filed by a former employee who claims she was fired for ..."
[10]	6/16/17	14:57	Reuters News	<i>MEDIA-CenturyLink accused of running Wells Fargo-like scheme-Bloomberg</i>	--
[11]	6/16/17	15:08	Reuters News	<i>BUZZ-CenturyLink, Level 3 tumble on whistleblower report</i>	"** Shares in CenturyLink fell as much as 7.2 pct in an afternoon trading spike after report an employee whistleblower filed a lawsuit against the telecommunications service provider"
[12]	6/16/17	15:48	Reuters News	<i>CenturyLink's ex-employee alleges fraudulent sales practice - BBG</i>	"A CenturyLink Inc employee claimed she lost her job for blowing the whistle on the telecom company's sales culture, according to a Bloomberg report on Friday."
[13]	6/16/17	16:27	Dow Jones Institutional News	<i>CenturyLink Shares Fall as Hit with Lawsuit, Downgrade -- Barron's Blog</i>	"CenturyLink (CTL) has been the best of the wireline telecom companies this year, holding up far better than its high-yielding cohorts, Frontier Communications (FTR) or Windstream Holdings (WIN)."
[14]	6/16/17	16:44	Reuters News	<i>UPDATE 2-CenturyLink's ex-employee alleges fraudulent sales practice - BBG</i>	"A CenturyLink Inc employee claimed she lost her job for blowing the whistle on the telecom company's sales culture, according to a Bloomberg report on Friday."
[15]	6/16/17		CFRA Equity Research	<i>CenturyLink Inc. Recommendation: Hold</i>	"This company has grown via acquisitions to become the third largest telecom provider in the U.S., offering services to both residential and business customers."
[16]	6/16/17		MorningStar Equity Research	<i>CenturyLink Accused in Lawsuit of Signing Up Customers to Services They Didn't Request</i>	"On June 16, a lawsuit was filed by a former employee of CenturyLink claiming she was fired for whistle-blowing regarding aggressive sales tactics..."

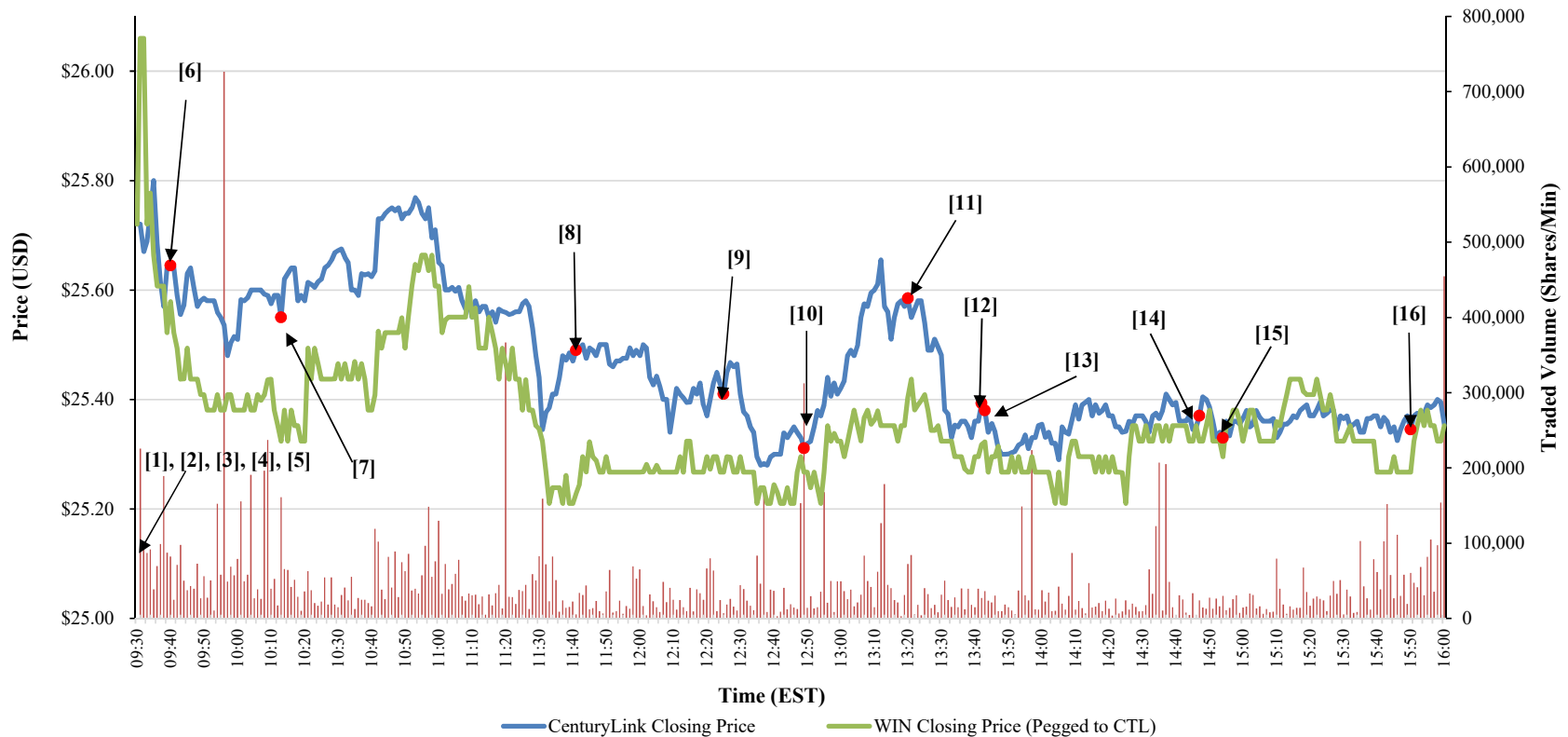
EXHIBIT 30B
CENTURYLINK NEWS STORIES AND ANALYST REPORTS
June 16, 2017

Time Stamp		Source	Headline	Description
Date	(E.T.)			
[A]	[B]	[C]	[D]	[E]
[17] 6/16/17		Theflyonthewall.com	<i>CenturyLink whistleblower alleges fraudulent billings scheme, Bloomberg says</i>	"A former CenturyLink (CTL) customer service and sales agent alleges in a lawsuit filed this week that she was fired days after notifying CEO Glen Post of the alleged scheme via which the company's high-pressure sales tactics that left ..."

Notes and Sources:

- [1] Time stamps are blank if unavailable.
- [2] News search results are from Factiva and Bloomberg searches for "CenturyLink" on June 16, 2017. All analyst reports dated June 16, 2017 and that were available to me are included here. All stories relevant to cramming are included.

EXHIBIT 31A
CENTURYLINK, INC.
INTRADAY TRADE PRICES
June 19, 2017



Notes & Sources:

- [1] By-minute prices are from TickData for regular trading hours.
- [2] Red data points indicate a published news story or analyst report. See Exhibit 31B for more information.
- [3] Numbers in brackets refer to specific stories or reports that are detailed in Exhibit 31B. While Exhibit 31B lists 19 stories, only the first 16 are included here; the other 3 were either published after market close or do not contain time stamps.
- [4] [1], [2], [3], [4] and [5] are stories or reports released over the weekend or before market start.

EXHIBIT 31B
CENTURYLINK NEWS STORIES AND ANALYST REPORTS
June 17 - 19, 2017

	Time Stamp		Source	Headline	Description
	Date	(E.T.)			
	[A]	[B]	[C]	[D]	[E]
[1]	6/17/17	17:22	The News-Star	<i>Suit accuses CenturyLink of Wells Fargo -like scam</i>	"According to a report filed today by Bloomberg, a lawsuit filed in Arizona accuses CenturyLink of a scam that signed people up for accounts without authorization."
[2]	6/18/17	10:41	The Arizona Republic	<i>Fired CenturyLink worker files lawsuit alleging fraud</i>	"An Arizona woman has filed a lawsuit alleging she was fired after raising concerns about CenturyLink employees fraudulently signing customers up for accounts without authorization."
[3]	6/19/17	6:30	Insurance Information Institute Database	<i>CenturyLink faces class-action lawsuit seeking up to \$12 billion</i>	"CenturyLink Inc. is facing a class action in up to \$12 billion in damages on behalf of consumers harmed by an alleged high-pressure sales culture. The complaint, filed in the central district of California on June 18, accuses the ..."
[4]	6/19/17	8:47	Bloomberg First Word	<i>Buy CenturyLink on Drop After Lawsuit, Oppenheimer Says</i>	"(Bloomberg) -- CenturyLink's 4.6% drop amid accusations of a Wells Fargo-like scheme provides a 'strong buying opportunity,' Oppenheimer analyst Timothy Horan (outperform) writes in a note."
[5]	6/19/17	9:02	Morgan Stanley	<i>CenturyLink Lawsuit Raises Questions but Precedents Suggest Limited Impact</i>	"Telecom operators face lawsuits and regulatory actions for "cramming" extra services onto customer bills from time to time, but the ultimate settlements usually are not that material. For example, back in 2015 Verizon (\$90m) and Sprint (\$68m) agreed to settlements related to unauthorized charges on customer wireless bills in a settlement with the FCC. AT&T (\$105m) and T-Mobile (\$90m) had settled the previous year."
[6]	6/19/17	9:40	Denver Business Journal Online	<i>CenturyLink accused of unethical sales techniques; Level 3 shares dragged down</i>	"Shares in Level 3 Communication Inc. fell Friday and continued to dip early Monday after news that its merger partner is accused of engaging in fraudulent billing."

EXHIBIT 31B
CENTURYLINK NEWS STORIES AND ANALYST REPORTS
June 17 - 19, 2017

	Time Stamp		Source	Headline	Description
	Date	(E.T.)			
	[A]	[B]	[C]	[D]	[E]
[7]	6/19/17	10:13	Reuters News	<i>MEDIA-CenturyLink faces class action lawsuit seeking up to \$12 bln - Bloomberg</i>	--
[8]	6/19/17	11:41	Business Wire	<i>EQUITY ALERT: Rosen Law Firm Announces Investigation of Securities Claims Against CenturyLink, Inc . - CTL</i>	"NEW YORK--(BUSINESS WIRE)--June 19, 2017-- Rosen Law Firm , a global investor rights law firm, announces it is investigating potential securities claims on behalf of shareholders of CenturyLink, Inc . (NYSE: CTL) resulting from allegations..."
[9]	6/19/17	12:25	PR Newswire	<i>SHAREHOLDER ALERT: Bronstein, Gewirtz & Grossman, LLC Announces Investigation of CenturyLink, Inc . (CTL)</i>	"NEW YORK, June 19, 2017 /PRNewswire/ -- Attorney Advertising -- Bronstein, Gewirtz & Grossman, LLC is investigating potential claims on behalf of purchasers of CenturyLink, Inc . ("CenturyLink" or the "Company") (NYSE: CTL) . Such investors..."
[10]	6/19/17	12:49	Business Wire	<i>Glancy Prongay & Murray LLP Commences Investigation on Behalf of CenturyLink, Inc. Investors</i>	"LOS ANGELES--(BUSINESS WIRE)--June 19, 2017-- Glancy Prongay & Murray LLP ("GPM") announces an investigation on behalf of CenturyLink, Inc. ("CenturyLink" or the "Company") (NYSE: CTL) investors concerning the Company and its officers' ..."
[11]	6/19/17	13:20	Business Wire	<i>SHAREHOLDER ALERT: Levi & Korsinsky, LLP Reminds Investors of the Commencement of an Investigation Involving Possible Securities Fraud Violations by the Board of Directors of CenturyLink, Inc .</i>	"NEW YORK--(BUSINESS WIRE)--June 19, 2017-- Levi & Korsinsky announces it has commenced an investigation of CenturyLink, Inc . (NYSE: CTL) concerning possible violations of federal securities laws. On June 16, 2017, Bloomberg published an ..."
[12]	6/19/17	13:42	PR Newswire	<i>CENTURYLINK INVESTOR ALERT: Faruqi & Faruqi , LLP Encourages Investors Who Suffered Losses Exceeding \$100,000 Investing In CenturyLink, Inc . To Contact The Firm</i>	"NEW YORK, June 19, 2017 /PRNewswire/ -- Faruqi & Faruqi , LLP, a leading national securities law firm, is investigating potential securities fraud at CenturyLink, Inc . ("CenturyLink" or the "Company") (NYSE: CTL)."

EXHIBIT 31B
CENTURYLINK NEWS STORIES AND ANALYST REPORTS
June 17 - 19, 2017

	Time Stamp		Source	Headline	Description
	Date	(E.T.)			
	[A]	[B]	[C]	[D]	[E]
[13]	6/19/17	13:43	Business Wire	<i>SHAREHOLDER ALERT: Goldberg Law PC Announces an Investigation of CenturyLink, Inc.</i>	"LOS ANGELES--(BUSINESS WIRE)--June 19, 2017-- Goldberg Law PC, a national shareholder rights litigation firm, announces that it is investigating claims on behalf of investors of CenturyLink, Inc . ("CenturyLink" or the "Company") (NYSE: ..."
[14]	6/19/17	14:47	Business Wire	<i>IMPORTANT INVESTOR ALERT: Lundin Law PC Announces an Investigation of CenturyLink, Inc . and Advises Investors with Losses to Contact the Firm</i>	"LOS ANGELES--(BUSINESS WIRE)--June 19, 2017-- Lundin Law PC, a shareholder rights firm, announces that it is investigating claims against CenturyLink, Inc . ("CenturyLink" or the "Company") (NYSE: CTL) concerning possible violations of ..."
[15]	6/19/17	14:54	PR Newswire	<i>SHAREHOLDER ALERT: Pomerantz Law Firm Investigates Claims On Behalf of Investors of CenturyLink, Inc . - CTL</i>	"NEW YORK, June 19, 2017 /PRNewswire/ -- Pomerantz LLP is investigating claims on behalf of investors of CenturyLink, Inc. ("CenturyLink" or the "Company") (NYSE: CTL) . Such investors are advised to contact Robert S. Willoughby at ..."
[16]	6/19/17	15:50	Theflyonthewall.com	<i>CenturyLink whistleblower suit impact likely limited, says Morgan...</i>	"15:50 EDT CenturyLink whistleblower suit impact likely limited, says Morgan StanleyMorgan Stanley analyst Simon Flannery said there could be some financial exposure to CenturyLink (CTL) if the lawsuit alleging that the company overcharged ..."
[17]	6/19/17	16:16	Business Wire	<i>IMPORTANT SHAREHOLDER ALERT: Khang & Khang LLP Announces an Investigation of CenturyLink, Inc . and Encourages Investors with Losses to Contact the Firm</i>	"IRVINE, Calif.--(BUSINESS WIRE)--June 19, 2017-- Khang & Khang LLP (the "Firm") announces that it is investigating claims against CenturyLink, Inc . ("CenturyLink" or the "Company") (NYSE: CTL) concerning possible violations of federal ..."

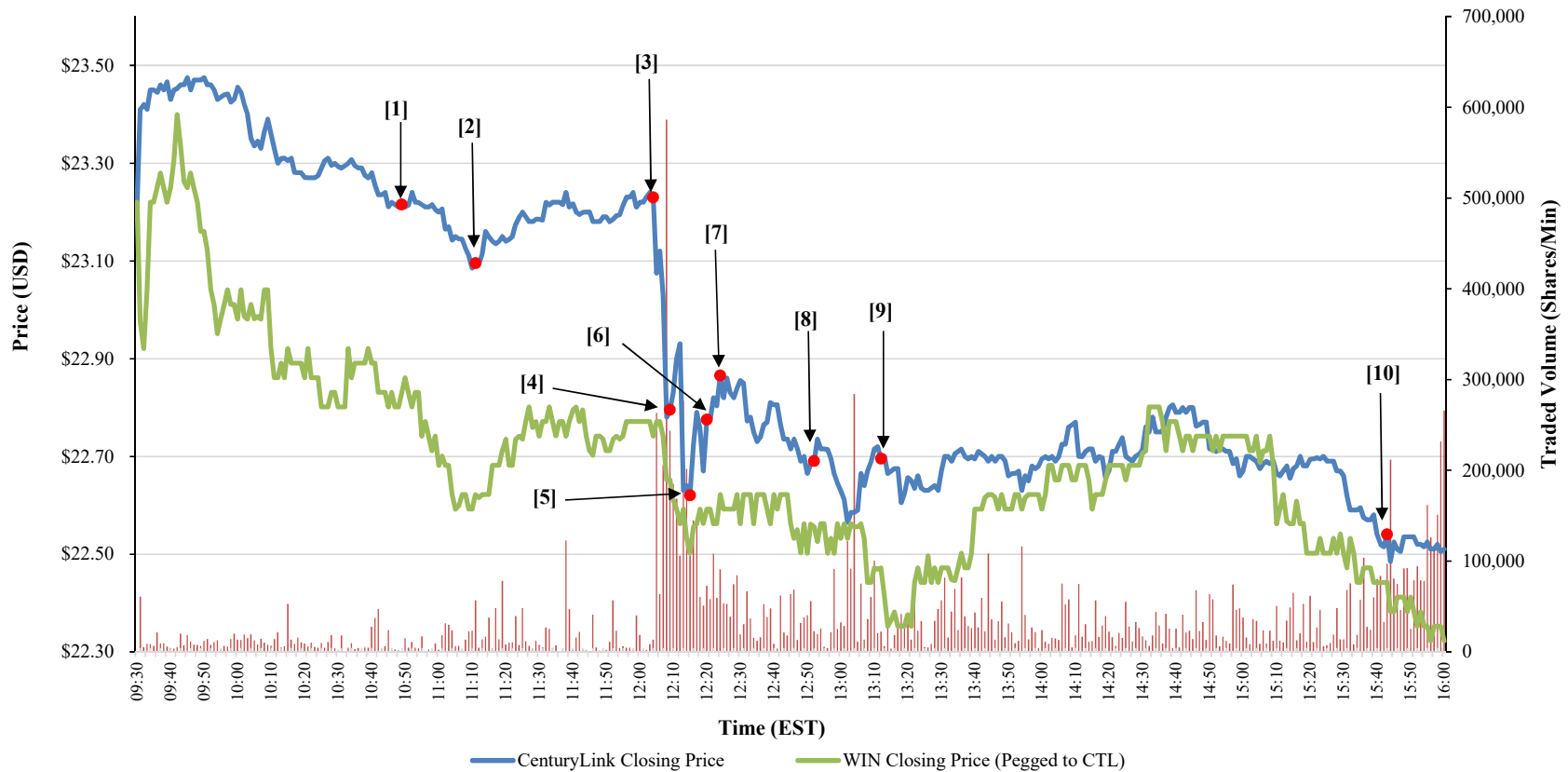
EXHIBIT 31B
CENTURYLINK NEWS STORIES AND ANALYST REPORTS
June 17 - 19, 2017

Time Stamp		Source	Headline	Description
Date	(E.T.)			
[A]	[B]	[C]	[D]	[E]
[18]	6/19/17	Gabelli & Company	<i>CenturyLink: Updating Estimates - Buy</i>	"Management noted that it expects CenturyLink to come in near the low end of its adjusted FY 2017 guidance range (i.e. adjusted for sale of data centers completed on 5/1/17)."
[19]	6/19/17	AAStocks Financial News	<i>Ex-Employee Claims CenturyLink Adding Toll Services to Customer without Consent</i>	"A former employee sued the US carrier CenturyLink in Arizona State Superior Court, claiming that she was fired after reporting the fraudulent sales to the CEO Glen Post. On the news, CenturyLink sank 4.6% last Friday (16 June)."

Notes and Sources:

- [1] Time stamps are blank if unavailable.
- [2] News search results are from Factiva and Bloomberg searches for "CenturyLink" from June 17 - June 19, 2017. All analyst reports dated June 17 - June 19, 2017 and that were available to me are included here. All stories relevant to cramming are included.

EXHIBIT 32A
CENTURYLINK, INC.
INTRADAY TRADE PRICES
July 12, 2017



Notes & Sources:

- [1] By-minute prices are from TickData for regular trading hours.
- [2] Red data points indicate a published news story or analyst report. See Exhibit 32B for more information.
- [3] Numbers in brackets refer to specific stories or reports that are detailed in Exhibit 32B. While Exhibit 32B lists 23 stories, only the first 10 are included here; the rest were either published after market close or do not contain time stamps.

EXHIBIT 32B
CENTURYLINK NEWS STORIES AND ANALYST REPORTS
July 12, 2017

	Time Stamp		Source	Headline	Description
	Date	(E.T.)			
	[A]	[B]	[C]	[D]	[E]
[1]	7/12/17	10:49	GlobeNewswire	<i>IMPORTANT INVESTOR ALERT: Khang & Khang LLP Announces Securities Class Action Lawsuit against CenturyLink, Inc . and Reminds Investors with Losses to Contact the Firm</i>	"IMPORTANT INVESTOR ALERT: Khang & Khang LLP Announces Securities Class Action Lawsuit against CenturyLink, Inc . and Reminds Investors with Losses to Contact the Firm"
[2]	7/12/17	11:11	GlobeNewswire	<i>Kessler Topaz Meltzer & Check, LLP - Important Deadline Reminder for CenturyLink, Inc . Shareholders</i>	--
[3]	7/12/17	12:04	Bloomberg News	<i>Minnesota AG Alleges that CTL Billed Higher Amounts than Quotes</i>	--
[4]	7/12/17	12:09	Bloomberg First Word	<i>CENTURYLINK FALLS 2% AFTER AG FILES SUIT ON BILLING ISSUES</i>	"--Sabastian Silva"
[5]	7/12/17	12:15	Theflyonthewall.com	<i>12:15 EDT Minnesota AG files suit against CenturyLink over billing practices</i>	"12:15 EDT Minnesota AG files suit against CenturyLink over billing practices"
[6]	7/12/17	12:20	Theflyonthewall.com	<i>12:20 EDT Minnesota Attorney General sues CenturyLink over billing...</i>	"12:20 EDT Minnesota Attorney General sues CenturyLink over billing practicesMinnesota Attorney General Lori Swanson filed a lawsuit today against CenturyLink (CTL) for "billing higher amounts than its sales agents quoted customers for ..."

EXHIBIT 32B
CENTURYLINK NEWS STORIES AND ANALYST REPORTS
July 12, 2017

	Time Stamp		Source	Headline	Description
	Date	(E.T.)			
	[A]	[B]	[C]	[D]	[E]
[7]	7/12/17	12:24	GlobeNewswire	<i>CTL SHAREHOLDER ALERT: The Law Offices of Vincent Wong Notifies Investors of a Class Action Involving CenturyLink, Inc. and a Lead Plaintiff Deadline of August 18, 2017</i>	"CTL SHAREHOLDER ALERT: The Law Offices of Vincent Wong Notifies Investors of a Class Action Involving CenturyLink, Inc. and a Lead Plaintiff Deadline of August 18, 2017"
[8]	7/12/17	12:52	Reuters News	<i>Minnesota attorney general sues CenturyLink on billing practices</i>	"NEW YORK, July 12 (Reuters) - Minnesota Attorney General Lori Swanson filed a lawsuit against cable provider CenturyLink Inc for its billing practices, sending shares down on Wednesday."
[9]	7/12/17	13:12	Dow Jones Institutional News	<i>State Lawsuit Puts Kink in CenturyLink Deal -- Market Talk</i>	"1312 ET - CenturyLink (CTL) legal troubles mount as Minnesota attorney general Lori Swanson sues the phone and internet provider, alleging in county court the company billed "higher amounts than its sales agents quoted customers" and "often..."
[10]	7/12/17	15:43	Bloomberg Legal News	<i>Court Document: Minnesota v. CenturyTel Broadband Services LLC</i>	"The following is a reformatted version of a court document issued by The State of Minnesota, County of Anoka District Court..."
[11]	7/12/17	16:13	Associated Press Newswires	<i>Minnesota AG sues CenturyLink for high internet bills</i>	"ST. PAUL, Minn. (AP) — Minnesota Attorney General Lori Swanson is suing CenturyLink, alleging the internet provider is overbilling many Minnesota customers after quoting lower rates."
[12]	7/12/17	17:54	Reuters News	<i>UPDATE 2-Minnesota sues CenturyLink alleging it overcharges customers</i>	"(Adds attorney general comment, updates share prices) By Anjali Athavaley NEW YORK, July 12 (Reuters) - Minnesota filed a lawsuit against CenturyLink Inc alleging the telecommunications provider charged customers more than they agreed to pay ..."

EXHIBIT 32B
CENTURYLINK NEWS STORIES AND ANALYST REPORTS
July 12, 2017

	Time Stamp		Source	Headline	Description
	Date	(E.T.)			
	[A]	[B]	[C]	[D]	[E]
[13]	7/12/17	18:02	Reuters News	<i>Minnesota sues CenturyLink alleging it overcharges customers</i>	"NEW YORK (Reuters) - Minnesota filed a lawsuit against CenturyLink Inc alleging the telecommunications provider charged customers more than they agreed to pay for internet and cable services, the state's Attorney General Lori Swanson said ..."
[14]	7/12/17	18:32	Dow Jones Institutional News	<i>Minnesota Sues CenturyLink Over Billing Complaints</i>	"Minnesota's attorney general accused CenturyLink Inc. of systematically overbilling customers, adding to the telecommunications provider's legal troubles as it pursues a massive corporate merger."
[15]	7/12/17	19:01	The Wall Street Journal Online	<i>Minnesota Sues CenturyLink Over Billing Complaints; State says investigation prompted by misquoted prices for television or internet service</i>	"Minnesota's attorney general accused CenturyLink Inc. of systematically overbilling customers, adding to the telecommunications provider's legal troubles as it pursues a massive corporate merger."
[16]	7/12/17	19:01	Dow Jones Institutional News	<i>Minnesota Sues CenturyLink Over Billing Complaints -- Update</i>	"Minnesota's attorney general accused CenturyLink Inc. of systematically overbilling customers, adding to the telecommunications provider's legal troubles as it pursues a massive corporate merger."
[17]	7/12/17		The New Orleans Advocate	<i>Louisiana-based CenturyLink sued by Minnesota's attorney general over alleged deceptive billing practices</i>	"The Minnesota attorney general's office filed suit Wednesday against CenturyLink, alleging the Louisiana-based telecom giant billed customers for higher amounts than its sales agents had quoted for internet and cable service, in some cases ..."
[18]	7/12/17		Mesabi Daily News	<i>Minnesota AG files suit against CenturyLink</i>	"Low quotes turned to high bills, and now a lawsuit. Minnesota Attorney General Lori Swanson filed a lawsuit Wednesday against CenturyLink, the Louisiana phone, cable and internet company, which allegedly refuse to honor quoted prices."
[19]	7/12/17		The Acadiana Advocate	<i>Louisiana-based CenturyLink sued by Minnesota's attorney general over alleged deceptive billing practices</i>	"The Minnesota attorney general's office filed suit Wednesday against CenturyLink, alleging the Louisiana-based telecom giant billed customers for higher amounts than its sales agents had quoted for internet and cable service, in some cases ..."

EXHIBIT 32B
CENTURYLINK NEWS STORIES AND ANALYST REPORTS
July 12, 2017

Time Stamp		Source	Headline	Description
Date	(E.T.)			
[A]	[B]	[C]	[D]	[E]
[20]	7/12/17	The Advocate	<i>Louisiana-based CenturyLink sued by Minnesota's attorney general over alleged deceptive billing practices</i>	"The Minnesota attorney general's office filed suit Wednesday against CenturyLink, alleging the Louisiana-based telecom giant billed customers for higher amounts than its sales agents had quoted for internet and cable service, in some cases ..."
[21]	7/12/17	USA Today Online	<i>CenturyLink faces Minnesota AG's fraud case, beyond \$12 billion class-action suit</i>	"Telecommunications giant CenturyLink faces a growing legal battle as the state of Minnesota on Wednesday filed a consumer fraud suit against the company, which already faced class-action suits in seven other states."
[22]	7/12/17	Accesswire	<i>IMPORTANT EQUITY ALERT: Lundin Law PC Announces Securities Class Action Lawsuit against CenturyLink, Inc. and Reminds Investors with Losses to Contact the Firm</i>	"LOS ANGELES, CA / ACCESSWIRE / July 12, 2017 / Lundin Law PC, a shareholder rights firm, announces a class action lawsuit against CenturyLink, Inc. ("CenturyLink" or the "Company") (NYSE: CTL) for possible violations of federal ..."
[23]	7/12/17	iCrowdNewswire	<i>SHAREHOLDER ALERT: Levi & Korsinsky, LLP Reminds Shareholders It Has Filed a Class Action to Recover Losses Suffered by Investors in CenturyLink, Inc. and Lead Plaintiff Deadline is Set for August 18, 2017 – CTL</i>	"NEW YORK — The following statement is being issued by Levi & Korsinsky, LLP: To: All persons or entities who purchased or otherwise acquired shares of CenturyLink, Inc. ("CenturyLink") (NYSE:CTL) between March 1, 2013 and June 16, 2017. You ..."

Notes and Sources:

- [1] Time stamps are blank if unavailable.
- [2] News search results are from Factiva and Bloomberg searches for "CenturyLink" on July 12, 2017. All analyst reports dated July 12, 2017 and that were available to me are included here. All stories relevant to cramming are included.

EXHIBIT 33

**DR. HARTZMARK'S AND DEAL'S VWAP AND DAILY RETURN CALCULATIONS
ON DAYS WITH CREDIT RATING DOWNGRADES AND ALLEGED CORRECTIVE DISCLOSURES**

Disclosure		Event Description	Hartzmark Measurement of VWAP and Returns	Deal Measurement of VWAP and Returns
Date	Timing			
[A]	[B]	[C]	[D]	[E]
Credit Rating Downgrades:				
[1]	14-Mar-13 11:07 AM	Moody's downgraded CenturyLink's senior unsecured debt rating to Ba2 from Baa3 (a two notch drop in ratings to non-investment grade)	For March 14, 2013, Dr. Hartzmark calculates VWAP using all transactions during regular trading hours, both before and after the announcement. He considers this VWAP the "post-announcement" price.	I distinguish between transactions that occurred before versus after the announcement during regular trading hours. I calculate pre-announcement price as VWAP for all transactions on the previous day, March 13, 2013, <i>plus</i> transactions on March 14, 2013 prior to 11:07 AM. I calculate "post-announcement" price as VWAP for all transactions on March 14, 2013 after 11:07 AM.
[2]	15-Mar-16 3:45 PM	Moody's downgraded CenturyLink's senior unsecured debt rating to Ba3 from Ba2 (single notch drop)	Since the news arrived close to end of trading day and there were no transactions after the announcement, March 15, 2016 is effectively the day prior to the disclosure. Dr. Hartzmark calculates VWAP for March 15, 2016 using all transactions for the day and considers this the pre-announcement VWAP.	My approach is the same as Dr. Hartzmark's.
[3]	31-Oct-16 12:14 PM 2:42 PM 2:54 PM	Moody's Announcement: Places CenturyLink's Ratings On Review For Downgrade after Level 3 acquisition announcement. S&P's Announcement: Places rating on CenturyLink's senior unsecured debt on CreditWatch with negative implications. Fitch Announcement: Places rating on CenturyLink's senior unsecured debt on Negative Watch	For October 31, 2016, Dr. Hartzmark calculates VWAP using all transactions during regular trading hours and considers this the post-announcement price.	I distinguish between transactions made before versus after the first announcement at 12:14 PM. I calculate pre-announcement price as VWAP for all transactions on October 28, 2016 <i>plus</i> transactions on October 31, 2016 prior to 12:14 PM. I calculate post-announcement price as VWAP for all transactions on October 31, 2016 after 12:14 PM.

EXHIBIT 33

**DR. HARTZMARK'S AND DEAL'S VWAP AND DAILY RETURN CALCULATIONS
ON DAYS WITH CREDIT RATING DOWNGRADES AND ALLEGED CORRECTIVE DISCLOSURES**

Disclosure		Event Description	Hartzmark Measurement of VWAP and Returns	Deal Measurement of VWAP and Returns
Date	Timing			
[A]	[B]	[C]	[D]	[E]
Alleged Corrective Disclosure Days:				
[4]	16-Jun-17 1:50 PM	Alleged corrective information was disclosed on Friday, June 16, 2017 at 1:50 p.m. (Eastern Time) in a Bloomberg news story.	Dr. Hartzmark uses the VWAP for June 16, 2017 as the pre-announcement price and measures returns by comparing VWAPs for June 16 and 19.	I calculate pre-announcement price as VWAP for all transactions on the prior day <i>plus</i> all transactions on June 16, 2017 prior to 1:50 PM. Post-announcement VWAP is based on transactions on June 16, 2017 after 1:50 PM.
[5]	19-Jun-17	Alleged corrective disclosures over the weekend of June 17-18, 2017 and on June 19, 2017.	Dr. Hartzmark uses the VWAP for June 16, 2017 as the pre-announcement price.	The VWAP based on transactions after 1:50 PM on June 16, 2017 serves as the pre-announcement VWAP for June 19, 2017. Post-announcement price is the VWAP based on all transactions on June 19, 2017 during regular trading hours.
[6]	12-Jul-17 12:04 PM	Alleged corrective information was disclosed on July 12, 2017 at approximately noon (Eastern Time), when the Complaint alleges that “the Minnesota Attorney General announced that it had filed a lawsuit against CenturyLink alleging violations of state consumer protection laws after a year-long investigation.”	Dr. Hartzmark uses the VWAP for July 12, 2017 as the pre-announcement price.	I calculate pre-announcement price as VWAP for all transactions on the prior day <i>plus</i> all transactions on July 12, 2017 prior to 12:04 PM. Post-announcement VWAP is based on transactions on July 12, 2017 after 12:04 PM.

Notes and Sources:

- [1] All data and descriptions for Dr. Hartzmark from Hartzmark Report ¶¶ 157-164, Exhibits 19 and 21.
- [2] Both Deal and Hartzmark analyses consider only transactions made during regular trading hours of 9:30 AM to 4:00 PM.
- [3] Dr. Hartzmark calculates daily return as the percentage change between the pre-announcement VWAP and post-announcement VWAP, as specified above. Since I use a different method for calculating VWAP my daily returns differ from Dr. Hartzmark.
- [4] For Dr. Hartzmark's analysis, effective announcement date is the date on which he measures the post-announcement price.
For 3 disclosures ([1], [3], [5]) Dr. Hartzmark's effective announcement date is the same as the disclosure date in column [A].
For the remaining 3 disclosures ([2], [4], [6]) Dr. Hartzmark's effective announcement date is the day after the disclosure date in column [A].
Except for disclosure [2], where the information was released 15 minutes before the end of regular trading, my effective announcement date is the disclosure date in column [A].
- [5] Even when Dr. Hartzmark and I agree on the effective announcement date, we calculate VWAP differently since I distinguish between transactions made before versus after the announcement.

EXHIBIT 34
7.6% NOTE: HARTZMARK VS. DEAL - COMPARISON OF VWAP AND ABNORMAL RETURN
ON ALLEGED CURATIVE DISCLOSURE DATES AND RATINGS DOWNGRADE DATES

	Disclosure Date			Downgrade Date		
	16-Jun-17	19-Jun-17	12-Jul-17	14-Mar-13	15-Mar-16	31-Oct-16
	[A]	[B]	[C]	[D]	[E]	[F]
VWAP:						
• Hartzmark						
<i>pre-announcement</i>	\$98.11	\$98.11	\$92.47	\$97.70	\$85.18	\$95.06
<i>post-announcement</i>	95.74	95.74	91.50	97.30	83.23	91.81
<i>following day</i>		93.14		97.14	83.10	88.14
• Deal						
<i>pre-announcement</i>	98.11	97.47	92.67	97.40	85.18	94.86
<i>post-announcement</i>	97.47	95.74	91.95	97.62	83.23	90.53
One-day Raw Return:						
• Hartzmark						
<i>post-announcement</i>	-2.42%	-2.42%	-1.05%	-0.41%	-2.29%	-3.41%
<i>following day</i>		-2.71%		-0.16%	-0.15%	-4.00%
• Deal						
<i>post-announcement</i>	-0.65%	-1.78%	-0.78%	0.23%	-2.29%	-4.56%
Abnormal Return (AR):						
• Hartzmark						
1-day AR	-2.65%	-2.46%	-1.22%	-0.28%	-2.42%	-2.80%
<i>t</i> -stat	(-4.42)	(-4.10)	(-2.16)	(-0.30)	(-1.91)	(-2.97)
2-day Cumulative AR		-5.05%		-0.24%	-4.18%	-5.99%
<i>t</i> -stat		(-6.02)		(-0.18)	(-2.35)	(-4.56)
• Deal						
AR	-0.65%	-1.99%	-1.21%	0.33%	-2.39%	-3.78%
<i>t</i> -stat	(-1.09)	(-3.20)	(-2.00)	(0.35)	(-1.89)	(-3.93)

EXHIBIT 34

**7.6% NOTE: HARTZMARK VS. DEAL - COMPARISON OF VWAP AND ABNORMAL RETURN
ON ALLEGED CURATIVE DISCLOSURE DATES AND RATINGS DOWNGRADE DATES**

Notes and Sources:

- [1] See Exhibit 33 for a description of VWAP calculation methodology on each disclosure date.
- [2] For announcements ([A], [C], [E]) pre-announcement date for Dr. Hartzmark's analysis is the same as the disclosure date.
For announcements ([B], [D], [F]) pre-announcement date for Dr. Hartzmark's analysis is the trading day prior to the disclosure date.
- [3] One-day Raw Return equals the percentage change in VWAP between the pre- and post-announcement dates.
- [4] Dr. Hartzmark's VWAP, Raw Return, and AR are from Hartzmark Report, Exhibits 19 and 21.
- [5] Deal VWAP and AR are as described in Exhibit 33 and Exhibit 35.
- [6] t -stat in parentheses below Abnormal Return and Cumulative Abnormal Return.
- [7] Bond trade data are from "CA Trades Jan012013 through Sep272019 (DIVER).xlsx" and
"CA Trades Jul012012 through Dec312012 (DIVER).xlsx" received from Counsel.

EXHIBIT 35
7.6% NOTES: ABNORMAL RETURN USING DEAL VWAP
ON ALLEGED CURATIVE CORRECTIVE DAYS AND BOND DOWNGRADE DAYS
Deal Model with Data Produced in the Hartzmark Report

	Disclosure Date			Downgrade Date		
	16-Jun-17	19-Jun-17	12-Jul-17	14-Mar-13	15-Mar-16	31-Oct-16
	[A]	[B]	[C]	[D]	[E]	[F]
R_M	0.0876 (0.599)	0.0763 (0.516)	0.176 (1.342)	0.000 (0.003)	0.121 (0.979)	-0.137 (-0.993)
R_{IND}	-0.033 (-0.618)	-0.028 (-0.526)	0.086 (1.529)	0.328** (2.081)	0.099 (0.758)	0.206* (1.797)
Maturity	1.387*** (4.923)	1.395*** (4.936)	1.266*** (4.381)	0.916* (1.754)	1.396*** (4.002)	1.647*** (4.051)
Credit	1.429*** (4.607)	1.450*** (4.659)	1.396*** (4.525)	0.900* (1.663)	1.542*** (4.702)	1.934*** (4.647)
Constant	0.000 (-0.087)	0.000 (-0.132)	0.000 (-0.746)	-0.001 (-0.947)	0.000 (0.214)	-0.001 (-0.749)
N	120	120	120	120	120	120
Adj. R ²	0.156	0.156	0.196	0.041	0.204	0.174
Abnormal Return (AR)	-0.65%	-1.99%	-1.21%	0.33%	-2.39%	-3.78%
t-stat	(-1.09)	(-3.20)	(-2.00)	(0.35)	(-1.89)	(-3.93)

EXHIBIT 35
7.6% NOTES: ABNORMAL RETURN USING DEAL VWAP
ON ALLEGED CURATIVE CORRECTIVE DAYS AND BOND DOWNGRADE DAYS
Deal Model with Data Produced in the Hartzmark Report

Notes and Sources:

- [1] This set of regressions uses data produced with the Hartzmark Report, including CREDIT excess returns.
- [2] The industry excess returns (industry residuals) are calculated by regressing industry index returns on market index returns. CREDIT excess returns are calculated as the residuals from a regression on the Credit-matched Bond index returns on the Maturity-matched index returns.
- [3] The Deal Model regression specification uses the DJSTEL Index as the industry index, while Hartzmark Model uses SPTRSC50 as the industry index.
- [4] The Deal Model for bond analysis calculates industry residuals for the DJSTEL over a window spanning the class period, consistent with Dr. Hartzmark's approach. This is done to be consistent with CREDIT residuals obtained using the same approach in production data. The estimation window does not exclude earnings announcement days.
- [5] The actual daily returns on the 6 Event Days, as well as on the days before and after the event days, are based on Deal VWAPs. See Exhibit 34.
- [6] All data, except for data for the DJSTEL index, are from PL_HARTMARK_0025877.
- [7] DJSTEL data from Bloomberg.

Model: $R_{it} = \alpha + \beta_1 R_{Mt} + \beta_2 R_{INDt} + \beta_3 MATURITY_t + \beta_4 CREDIT_t + \varepsilon_{it}$

Estimation period: 120 days ending one day before event date.
 ***, **, * Statistical significance at 99, 95 and 90 percent levels, respectively.
 t-stats are in parentheses below the coefficient estimates.

R_M Daily returns on the market index, which is the S&P500 Index. Daily returns include all distributions.

R_{IND} Industry index returns are residuals from a regression of the industry index on the market index. This captures the variation in the industry index return that is uncorrelated with the market index return. The industry index used here is value-weighted Dow Jones Select Telecom (DJSTEL) Index. CTL daily returns are excluded from the industry index.

MATURITY Daily return on a Treasury Note with due date closest to the maturity date of the 7.6% Note.

CREDIT Credit excess return are residuals from a regression of the daily returns on Credit index (ICE BofAML 15+ Year BB Cash Pay High Yield Index) on the Treasury Note returns. This captures the variation in the credit index return that is uncorrelated with the Treasury Note return.

AR Abnormal Return, which equals actual daily return *less* the return predicted by the model on the alleged curative disclosure date or bond downgrade date.

Stock and index data are from Bloomberg.

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[1]	1-Mar-2013	6,545,795	\$34.89	0.6%	0.2%	(0.4%)	(0.5%)	1.1%	0.51	61.4%
[2]	4-Mar-2013	5,474,546	\$35.11	0.6%	0.5%	(0.2%)	(0.1%)	0.7%	0.33	74.2%
[3]	5-Mar-2013	5,383,057	\$35.23	0.3%	1.0%	(0.3%)	0.1%	0.3%	0.13	89.7%
[4]	6-Mar-2013	6,010,606	\$35.60	1.1%	0.1%	0.1%	0.0%	1.0%	0.47	63.8%
[5]	7-Mar-2013	7,543,741	\$34.53	(1.5%)	0.2%	0.3%	0.4%	(1.9%)	(0.85)	39.5%
[6]	8-Mar-2013	6,309,524	\$34.39	(0.4%)	0.5%	0.4%	0.6%	(1.0%)	(0.46)	64.6%
[7]	11-Mar-2013	7,968,952	\$34.43	0.1%	0.3%	(0.2%)	(0.2%)	0.4%	0.16	87.0%
[8]	12-Mar-2013	5,299,420	\$34.57	0.4%	(0.2%)	0.5%	0.3%	0.1%	0.05	96.2%
[9]	13-Mar-2013	3,320,152	\$34.72	0.4%	0.2%	(0.4%)	(0.5%)	0.9%	0.41	68.2%
[10]	14-Mar-2013	4,360,604	\$34.75	0.1%	0.6%	0.3%	0.5%	(0.4%)	(0.20)	84.6%
[11]	15-Mar-2013	8,856,862	\$34.37	(1.1%)	(0.2%)	(0.3%)	(0.6%)	(0.5%)	(0.24)	81.2%
[12]	18-Mar-2013	5,225,833	\$34.20	(0.5%)	(0.5%)	0.3%	(0.1%)	(0.3%)	(0.16)	87.6%
[13]	19-Mar-2013	4,380,525	\$34.25	0.1%	(0.2%)	0.4%	0.3%	(0.1%)	(0.05)	95.8%
[14]	20-Mar-2013	10,043,379	\$34.58	1.0%	0.7%	(0.2%)	(0.1%)	1.0%	0.47	64.0%
[15]	21-Mar-2013	5,477,392	\$34.49	(0.3%)	(0.8%)	0.3%	(0.3%)	(0.0%)	(0.00)	99.7%
[16]	22-Mar-2013	6,278,765	\$35.03	1.6%	0.7%	(0.1%)	0.1%	1.5%	0.68	50.1%
[17]	25-Mar-2013	4,910,880	\$34.99	(0.1%)	(0.3%)	0.3%	0.1%	(0.2%)	(0.08)	93.5%
[18]	26-Mar-2013	4,088,242	\$35.20	0.6%	0.8%	(0.4%)	(0.1%)	0.7%	0.33	74.0%
[19]	27-Mar-2013	3,570,542	\$35.12	(0.2%)	(0.1%)	(0.5%)	(0.9%)	0.7%	0.31	75.7%
[20]	28-Mar-2013	4,865,173	\$35.13	0.0%	0.4%	0.9%	1.3%	(1.3%)	(0.59)	55.6%
[21]	1-Apr-2013	4,201,694	\$34.86	(0.8%)	(0.4%)	0.4%	0.1%	(0.9%)	(0.40)	69.2%
[22]	2-Apr-2013	5,338,554	\$35.18	0.9%	0.5%	(0.3%)	(0.2%)	1.1%	0.51	61.4%
[23]	3-Apr-2013	6,475,866	\$35.06	(0.3%)	(1.0%)	1.0%	0.6%	(0.9%)	(0.42)	67.8%
[24]	4-Apr-2013	6,688,770	\$36.02	2.7%	0.4%	0.5%	0.8%	1.9%	0.87	38.6%
[25]	5-Apr-2013	4,075,107	\$36.11	0.2%	(0.4%)	1.4%	1.5%	(1.3%)	(0.56)	57.5%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	t-Statistic	p-Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[26]	8-Apr-2013	3,033,848	\$36.16	0.1%	0.7%	0.5%	1.0%	(0.8%)	(0.38)	70.2%
[27]	9-Apr-2013	3,452,652	\$36.35	0.5%	0.4%	0.4%	0.6%	(0.1%)	(0.05)	95.9%
[28]	10-Apr-2013	5,814,105	\$36.95	1.7%	1.2%	1.4%	2.6%	(0.9%)	(0.41)	68.5%
[29]	11-Apr-2013	4,436,164	\$37.26	0.8%	0.4%	(0.0%)	0.1%	0.7%	0.32	74.9%
[30]	12-Apr-2013	4,297,917	\$37.22	(0.1%)	(0.3%)	1.0%	1.0%	(1.1%)	(0.50)	61.8%
[31]	15-Apr-2013	5,090,312	\$36.69	(1.4%)	(2.3%)	0.6%	(0.9%)	(0.5%)	(0.24)	81.3%
[32]	16-Apr-2013	7,114,122	\$37.16	1.3%	1.4%	(0.3%)	0.5%	0.7%	0.34	73.7%
[33]	17-Apr-2013	3,996,064	\$36.76	(1.1%)	(1.4%)	(0.3%)	(1.4%)	0.4%	0.16	87.4%
[34]	18-Apr-2013	3,669,660	\$36.85	0.2%	(0.7%)	1.6%	1.4%	(1.2%)	(0.51)	61.3%
[35]	19-Apr-2013	4,072,343	\$37.17	0.9%	0.9%	0.8%	1.5%	(0.6%)	(0.29)	77.0%
[36]	22-Apr-2013	3,975,632	\$37.35	0.5%	0.5%	0.0%	0.3%	0.2%	0.07	94.2%
[37]	23-Apr-2013	4,056,604	\$37.89	1.4%	1.0%	0.7%	1.5%	(0.0%)	(0.01)	99.1%
[38]	24-Apr-2013	14,627,256	\$37.10	(2.1%)	0.0%	(1.0%)	(1.1%)	(0.9%)	(0.43)	67.0%
[39]	25-Apr-2013	5,142,827	\$37.53	1.2%	0.4%	1.9%	2.4%	(1.3%)	(0.56)	57.5%
[40]	26-Apr-2013	3,907,301	\$37.15	(1.0%)	(0.2%)	(0.9%)	(1.2%)	0.2%	0.07	94.6%
[41]	29-Apr-2013	3,681,299	\$37.45	0.8%	0.7%	(0.2%)	0.2%	0.6%	0.27	79.0%
[42]	30-Apr-2013	3,936,668	\$37.57	0.3%	0.2%	0.3%	0.5%	(0.1%)	(0.06)	95.3%
[43]	1-May-2013	3,768,244	\$37.19	(1.0%)	(0.9%)	(0.5%)	(1.2%)	0.2%	0.10	91.7%
[44]	2-May-2013	4,073,012	\$37.04	(0.4%)	0.9%	(0.3%)	0.3%	(0.7%)	(0.33)	74.4%
[45]	3-May-2013	4,638,878	\$37.14	0.3%	1.1%	(0.8%)	(0.2%)	0.4%	0.20	84.3%
[46]	6-May-2013	3,274,569	\$37.05	(0.2%)	0.2%	(0.1%)	(0.0%)	(0.2%)	(0.10)	91.8%
[47]	7-May-2013	4,654,524	\$37.06	0.0%	0.5%	0.1%	0.5%	(0.4%)	(0.20)	83.8%
[48]	8-May-2013	7,440,484	\$37.30	0.6%	0.5%	0.7%	1.1%	(0.4%)	(0.20)	84.1%
[49]	9-May-2013	8,874,180	\$37.24	(0.2%)	(0.3%)	(0.6%)	(1.1%)	0.9%	0.44	66.1%
[50]	10-May-2013	4,113,664	\$37.62	1.0%	0.4%	0.6%	1.0%	0.0%	0.01	98.8%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[51]	13-May-2013	3,094,749	\$37.68	0.2%	0.0%	(0.4%)	(0.5%)	0.7%	0.32	74.6%
[52]	14-May-2013	3,954,905	\$37.74	0.2%	1.0%	0.2%	1.0%	(0.9%)	(0.40)	68.9%
[53]	15-May-2013	4,935,656	\$37.85	0.3%	0.5%	0.1%	0.5%	(0.2%)	(0.11)	91.1%
[54]	16-May-2013	5,488,264	\$37.45	(1.1%)	(0.5%)	(0.2%)	(0.8%)	(0.3%)	(0.14)	88.7%
[55]	17-May-2013	5,211,826	\$37.67	0.6%	1.0%	0.1%	0.9%	(0.3%)	(0.14)	89.1%
[56]	20-May-2013	3,629,909	\$37.63	(0.1%)	(0.1%)	(0.2%)	(0.3%)	0.2%	0.10	91.9%
[57]	21-May-2013	5,313,643	\$37.23	(1.1%)	0.2%	0.1%	0.2%	(1.3%)	(0.61)	54.5%
[58]	22-May-2013	5,604,768	\$37.02	(0.6%)	(0.8%)	(1.7%)	(2.7%)	2.1%	0.96	33.8%
[59]	23-May-2013	13,496,713	\$37.43	1.1%	(0.3%)	0.6%	0.3%	0.8%	0.39	69.7%
[60]	24-May-2013	11,070,804	\$37.27	(0.4%)	(0.1%)	0.2%	0.1%	(0.6%)	(0.26)	79.4%
[61]	28-May-2013	13,091,869	\$37.07	(0.5%)	0.6%	(1.3%)	(1.0%)	0.4%	0.19	85.1%
[62]	29-May-2013	8,728,778	\$36.17	(2.4%)	(0.7%)	(1.4%)	(2.2%)	(0.3%)	(0.12)	90.7%
[63]	30-May-2013	6,585,577	\$35.23	(1.1%)	0.4%	0.2%	0.5%	(1.6%)	(0.73)	46.5%
[64]	31-May-2013	12,839,955	\$34.15	(3.1%)	(1.4%)	0.5%	(0.8%)	(2.2%)	(1.02)	31.1%
[65]	3-Jun-2013	6,059,090	\$34.47	0.9%	0.6%	(0.6%)	(0.2%)	1.2%	0.53	59.6%
[66]	4-Jun-2013	6,115,357	\$34.76	0.8%	(0.5%)	(0.2%)	(0.8%)	1.7%	0.77	44.4%
[67]	5-Jun-2013	7,853,308	\$34.93	0.5%	(1.4%)	0.0%	(1.3%)	1.8%	0.82	41.4%
[68]	6-Jun-2013	5,079,912	\$35.50	1.6%	0.9%	1.0%	1.6%	0.0%	0.02	98.6%
[69]	7-Jun-2013	5,187,098	\$35.43	(0.2%)	1.3%	(1.0%)	(0.0%)	(0.2%)	(0.09)	93.1%
[70]	10-Jun-2013	3,194,525	\$35.62	0.5%	(0.0%)	0.5%	0.4%	0.2%	0.08	93.5%
[71]	11-Jun-2013	9,925,177	\$35.49	(0.4%)	(1.0%)	(0.4%)	(1.4%)	1.0%	0.47	63.7%
[72]	12-Jun-2013	4,738,218	\$35.39	(0.3%)	(0.8%)	0.0%	(0.8%)	0.5%	0.22	82.7%
[73]	13-Jun-2013	3,302,196	\$35.93	1.5%	1.5%	0.8%	1.9%	(0.4%)	(0.16)	87.2%
[74]	14-Jun-2013	4,272,929	\$36.04	0.3%	(0.6%)	0.2%	(0.4%)	0.7%	0.32	74.7%
[75]	17-Jun-2013	3,642,002	\$35.99	(0.1%)	0.8%	(1.7%)	(1.2%)	1.1%	0.48	63.5%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

	Date	Volume	Price	CTL Return	Market Return	Excess Industry Return	Predicted Return	Deal Model Abnormal Return	t-Statistic	p-Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[76]	18-Jun-2013	2,884,387	\$36.24	0.7%	0.8%	0.3%	0.8%	(0.1%)	(0.07)	94.8%
[77]	19-Jun-2013	4,798,351	\$35.33	(2.5%)	(1.4%)	(1.1%)	(2.3%)	(0.2%)	(0.10)	91.7%
[78]	20-Jun-2013	6,233,174	\$34.13	(3.4%)	(2.5%)	0.1%	(2.1%)	(1.3%)	(0.59)	55.7%
[79]	21-Jun-2013	8,513,623	\$34.18	0.1%	0.3%	0.2%	0.3%	(0.1%)	(0.07)	94.8%
[80]	24-Jun-2013	5,296,647	\$33.99	(0.6%)	(1.2%)	(0.5%)	(1.7%)	1.1%	0.51	61.3%
[81]	25-Jun-2013	5,657,303	\$34.96	2.9%	1.0%	0.9%	1.6%	1.3%	0.59	55.9%
[82]	26-Jun-2013	3,820,848	\$34.85	(0.3%)	1.0%	(0.2%)	0.5%	(0.8%)	(0.36)	71.8%
[83]	27-Jun-2013	3,755,633	\$35.27	1.2%	0.6%	1.7%	2.1%	(0.9%)	(0.39)	70.1%
[84]	28-Jun-2013	4,649,488	\$35.35	0.2%	(0.4%)	0.8%	0.3%	(0.1%)	(0.03)	97.4%
[85]	1-Jul-2013	2,583,345	\$35.15	(0.6%)	0.6%	(0.7%)	(0.3%)	(0.3%)	(0.12)	90.3%
[86]	2-Jul-2013	4,076,082	\$35.24	0.3%	(0.0%)	(0.0%)	(0.2%)	0.4%	0.19	84.7%
[87]	3-Jul-2013	1,778,305	\$35.27	0.1%	0.1%	0.5%	0.4%	(0.4%)	(0.17)	86.8%
[88]	5-Jul-2013	1,952,476	\$35.44	0.5%	1.0%	0.0%	0.8%	(0.3%)	(0.13)	89.9%
[89]	8-Jul-2013	2,876,758	\$35.35	(0.3%)	0.6%	(0.4%)	(0.1%)	(0.1%)	(0.07)	94.8%
[90]	9-Jul-2013	2,869,190	\$35.39	0.1%	0.7%	(0.1%)	0.4%	(0.3%)	(0.13)	89.6%
[91]	10-Jul-2013	3,012,272	\$35.46	0.2%	0.0%	1.0%	0.9%	(0.7%)	(0.31)	75.5%
[92]	11-Jul-2013	2,819,280	\$36.01	1.6%	1.4%	0.1%	1.1%	0.4%	0.19	84.8%
[93]	12-Jul-2013	3,255,564	\$36.24	0.6%	0.3%	(0.1%)	(0.0%)	0.6%	0.30	76.8%
[94]	15-Jul-2013	3,642,826	\$36.24	-	0.1%	4.7%	4.7%	(4.7%)	(1.81)	7.4%
[95]	16-Jul-2013	3,790,946	\$36.27	0.1%	(0.4%)	0.8%	0.1%	(0.0%)	(0.01)	98.9%
[96]	17-Jul-2013	3,505,092	\$36.11	(0.4%)	0.3%	(0.2%)	0.0%	(0.4%)	(0.20)	84.0%
[97]	18-Jul-2013	4,903,620	\$35.81	(0.8%)	0.5%	(0.4%)	0.0%	(0.9%)	(0.39)	69.9%
[98]	19-Jul-2013	3,644,991	\$35.98	0.5%	0.2%	0.0%	0.0%	0.5%	0.21	83.2%
[99]	22-Jul-2013	3,532,214	\$35.92	(0.2%)	0.2%	0.2%	0.2%	(0.4%)	(0.16)	87.0%
[100]	23-Jul-2013	13,298,269	\$35.94	0.1%	(0.2%)	(0.0%)	(0.3%)	0.4%	0.17	86.6%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[101]	24-Jul-2013	2,944,325	\$35.87	(0.2%)	(0.4%)	(0.4%)	(0.7%)	0.5%	0.23	81.7%
[102]	25-Jul-2013	3,214,116	\$35.83	(0.1%)	0.3%	(0.0%)	0.0%	(0.2%)	(0.07)	94.4%
[103]	26-Jul-2013	2,757,887	\$36.03	0.6%	0.1%	(0.7%)	(0.6%)	1.1%	0.51	61.4%
[104]	29-Jul-2013	2,519,767	\$36.15	0.3%	(0.4%)	0.4%	(0.2%)	0.5%	0.23	82.1%
[105]	30-Jul-2013	4,545,076	\$35.72	(1.2%)	0.0%	(0.5%)	(0.4%)	(0.8%)	(0.34)	73.1%
[106]	31-Jul-2013	4,625,270	\$35.85	0.4%	0.0%	(0.9%)	(0.8%)	1.2%	0.52	60.4%
[107]	1-Aug-2013	3,251,816	\$36.32	1.3%	1.3%	(0.6%)	0.5%	0.8%	0.38	70.8%
[108]	2-Aug-2013	3,140,465	\$36.11	(0.6%)	0.2%	(0.1%)	(0.1%)	(0.5%)	(0.23)	81.6%
[109]	5-Aug-2013	3,583,586	\$36.09	(0.1%)	(0.1%)	1.1%	0.5%	(0.5%)	(0.24)	80.9%
[110]	6-Aug-2013	3,197,999	\$36.18	0.2%	(0.6%)	(0.3%)	(0.8%)	1.1%	0.48	63.4%
[111]	7-Aug-2013	4,624,033	\$36.39	0.6%	(0.3%)	0.1%	(0.3%)	0.9%	0.41	68.0%
[112]	8-Aug-2013	16,527,825	\$34.36	(5.6%)	0.4%	(0.5%)	0.2%	(5.8%)	(7.09)	0.0%
[113]	9-Aug-2013	8,025,526	\$33.89	(1.4%)	(0.3%)	0.1%	(0.2%)	(1.1%)	(1.20)	23.2%
[114]	12-Aug-2013	4,550,973	\$34.08	0.6%	(0.1%)	0.1%	(0.1%)	0.7%	0.71	47.9%
[115]	13-Aug-2013	4,346,033	\$33.88	(0.6%)	0.3%	(1.0%)	(0.2%)	(0.4%)	(0.44)	65.8%
[116]	14-Aug-2013	4,280,600	\$33.73	(0.4%)	(0.5%)	(0.1%)	(0.5%)	0.1%	0.06	95.4%
[117]	15-Aug-2013	4,304,927	\$33.47	(0.8%)	(1.4%)	0.1%	(1.1%)	0.4%	0.41	68.6%
[118]	16-Aug-2013	5,853,782	\$32.92	(1.6%)	(0.3%)	(0.5%)	(0.5%)	(1.1%)	(1.26)	21.1%
[119]	19-Aug-2013	4,647,503	\$32.56	(1.1%)	(0.6%)	(1.0%)	(0.9%)	(0.2%)	(0.22)	82.7%
[120]	20-Aug-2013	3,407,718	\$32.58	0.1%	0.4%	0.6%	0.5%	(0.4%)	(0.44)	66.3%
[121]	21-Aug-2013	4,057,167	\$32.32	(0.8%)	(0.6%)	(0.4%)	(0.7%)	(0.1%)	(0.12)	90.2%
[122]	22-Aug-2013	22,122,025	\$32.58	0.8%	0.9%	(0.1%)	0.5%	0.3%	0.28	77.7%
[123]	23-Aug-2013	15,350,867	\$33.30	2.2%	0.4%	0.5%	0.4%	1.8%	1.97	5.1%
[124]	26-Aug-2013	3,356,395	\$33.14	(0.5%)	(0.4%)	(0.2%)	(0.5%)	0.0%	0.01	99.0%
[125]	27-Aug-2013	3,796,417	\$32.94	(0.6%)	(1.6%)	0.3%	(1.2%)	0.6%	0.68	49.5%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess		Deal Model		
	Date	Volume	Price	Return	Return	Industry	Predicted	Abnormal	t-Statistic	p-Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[126]	28-Aug-2013	2,789,114	\$32.71	(0.7%)	0.3%	(0.3%)	0.0%	(0.7%)	(0.80)	42.8%
[127]	29-Aug-2013	4,556,286	\$33.10	1.2%	0.2%	0.6%	0.4%	0.8%	0.90	37.1%
[128]	30-Aug-2013	5,665,680	\$33.12	0.1%	(0.3%)	(0.8%)	(0.6%)	0.7%	0.77	44.3%
[129]	3-Sep-2013	7,474,313	\$32.91	(0.6%)	0.4%	(0.1%)	0.2%	(0.9%)	(0.94)	34.9%
[130]	4-Sep-2013	7,055,655	\$32.50	0.4%	0.8%	(0.1%)	0.5%	(0.1%)	(0.16)	87.5%
[131]	5-Sep-2013	3,960,555	\$32.13	(1.1%)	0.1%	(0.5%)	(0.2%)	(1.0%)	(1.05)	29.8%
[132]	6-Sep-2013	6,892,358	\$31.90	(0.7%)	0.0%	(0.2%)	(0.2%)	(0.6%)	(0.61)	54.1%
[133]	9-Sep-2013	5,716,016	\$32.02	0.4%	1.0%	0.3%	0.8%	(0.5%)	(0.51)	61.2%
[134]	10-Sep-2013	14,418,742	\$32.62	1.9%	0.7%	0.6%	0.7%	1.1%	1.24	21.9%
[135]	11-Sep-2013	3,411,141	\$32.59	(0.1%)	0.3%	0.3%	0.3%	(0.4%)	(0.44)	65.8%
[136]	12-Sep-2013	3,685,639	\$32.38	(0.6%)	(0.3%)	(0.3%)	(0.4%)	(0.2%)	(0.22)	82.9%
[137]	13-Sep-2013	2,966,766	\$32.34	(0.1%)	0.3%	(0.1%)	0.1%	(0.2%)	(0.20)	83.9%
[138]	16-Sep-2013	3,519,170	\$32.27	(0.2%)	0.6%	(1.0%)	(0.1%)	(0.1%)	(0.12)	90.7%
[139]	17-Sep-2013	2,456,657	\$32.43	0.5%	0.4%	0.0%	0.2%	0.3%	0.28	78.0%
[140]	18-Sep-2013	5,094,935	\$32.55	0.4%	1.2%	(0.3%)	0.7%	(0.4%)	(0.39)	69.9%
[141]	19-Sep-2013	3,666,097	\$32.71	0.5%	(0.2%)	(0.1%)	(0.3%)	0.8%	0.85	39.7%
[142]	20-Sep-2013	5,997,935	\$32.28	(1.3%)	(0.7%)	(0.3%)	(0.8%)	(0.5%)	(0.57)	56.8%
[143]	23-Sep-2013	3,655,468	\$32.24	(0.1%)	(0.5%)	0.8%	(0.1%)	(0.0%)	(0.05)	95.9%
[144]	24-Sep-2013	3,905,540	\$32.17	(0.2%)	(0.2%)	(0.0%)	(0.3%)	0.1%	0.10	91.9%
[145]	25-Sep-2013	3,563,460	\$32.00	(0.5%)	(0.3%)	0.7%	0.0%	(0.5%)	(0.61)	54.0%
[146]	26-Sep-2013	2,496,826	\$32.11	0.3%	0.4%	0.4%	0.3%	0.0%	0.03	97.2%
[147]	27-Sep-2013	3,471,455	\$31.78	(1.0%)	(0.4%)	(0.4%)	(0.6%)	(0.4%)	(0.44)	65.9%
[148]	30-Sep-2013	5,619,988	\$31.38	(1.3%)	(0.6%)	0.3%	(0.4%)	(0.8%)	(0.92)	35.7%
[149]	1-Oct-2013	5,556,554	\$31.76	1.2%	0.8%	0.1%	0.5%	0.7%	0.80	42.7%
[150]	2-Oct-2013	4,283,450	\$31.61	(0.5%)	(0.0%)	0.2%	(0.1%)	(0.4%)	(0.44)	66.4%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	t-Statistic	p-Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[151]	3-Oct-2013	4,214,069	\$31.19	(1.3%)	(0.9%)	0.1%	(0.8%)	(0.5%)	(0.58)	56.6%
[152]	4-Oct-2013	3,263,308	\$31.20	0.0%	0.7%	(0.4%)	0.2%	(0.2%)	(0.19)	84.7%
[153]	7-Oct-2013	3,576,159	\$31.41	0.7%	(0.9%)	0.7%	(0.5%)	1.2%	1.34	18.2%
[154]	8-Oct-2013	4,449,659	\$31.28	(0.4%)	(1.2%)	(0.9%)	(1.5%)	1.1%	1.18	23.9%
[155]	9-Oct-2013	7,853,078	\$32.19	2.9%	0.1%	(0.2%)	(0.2%)	3.1%	3.45	0.1%
[156]	10-Oct-2013	8,815,816	\$33.34	3.6%	2.2%	(0.1%)	1.5%	2.1%	2.11	3.7%
[157]	11-Oct-2013	4,051,609	\$33.22	(0.4%)	0.6%	0.5%	0.6%	(1.0%)	(1.01)	31.3%
[158]	14-Oct-2013	4,474,771	\$32.68	(1.6%)	0.4%	(0.3%)	0.1%	(1.7%)	(1.75)	8.3%
[159]	15-Oct-2013	3,875,693	\$32.53	(0.5%)	(0.7%)	0.2%	(0.6%)	0.2%	0.18	86.1%
[160]	16-Oct-2013	3,559,743	\$32.92	1.2%	1.4%	0.2%	1.0%	0.2%	0.16	87.7%
[161]	17-Oct-2013	3,572,553	\$33.25	1.0%	0.7%	1.1%	0.9%	0.2%	0.16	87.6%
[162]	18-Oct-2013	3,695,018	\$33.01	(0.7%)	0.7%	0.3%	0.5%	(1.2%)	(1.29)	19.8%
[163]	21-Oct-2013	3,656,342	\$32.99	(0.1%)	0.0%	(0.3%)	(0.3%)	0.2%	0.20	84.4%
[164]	22-Oct-2013	3,628,492	\$33.42	1.3%	0.6%	(0.2%)	0.2%	1.1%	1.12	26.6%
[165]	23-Oct-2013	3,397,083	\$33.39	(0.1%)	(0.5%)	(0.0%)	(0.5%)	0.4%	0.43	66.6%
[166]	24-Oct-2013	3,284,482	\$33.22	(0.5%)	0.3%	(0.0%)	0.1%	(0.6%)	(0.66)	50.9%
[167]	25-Oct-2013	3,589,224	\$33.27	0.2%	0.4%	(0.2%)	0.2%	(0.0%)	(0.02)	98.6%
[168]	28-Oct-2013	3,844,839	\$33.52	0.8%	0.1%	0.2%	0.1%	0.7%	0.70	48.5%
[169]	29-Oct-2013	4,926,083	\$33.81	0.9%	0.6%	0.3%	0.5%	0.4%	0.40	68.7%
[170]	30-Oct-2013	2,943,781	\$33.53	(0.8%)	(0.5%)	0.2%	(0.4%)	(0.4%)	(0.41)	68.1%
[171]	31-Oct-2013	4,128,752	\$33.86	1.0%	(0.4%)	(0.3%)	(0.6%)	1.5%	1.58	11.7%
[172]	1-Nov-2013	3,978,389	\$33.58	(0.8%)	0.3%	(1.0%)	(0.3%)	(0.6%)	(0.56)	57.6%
[173]	4-Nov-2013	3,476,054	\$33.76	0.5%	0.4%	0.6%	0.4%	0.1%	0.11	90.9%
[174]	5-Nov-2013	5,697,242	\$33.38	(1.1%)	(0.3%)	0.2%	(0.3%)	(0.9%)	(0.89)	37.6%
[175]	6-Nov-2013	4,634,868	\$33.89	1.5%	0.5%	(0.3%)	0.2%	1.4%	1.39	16.7%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	t-Statistic	p-Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[176]	7-Nov-2013	13,537,330	\$31.81	(6.1%)	(1.3%)	(0.7%)	(1.4%)	(4.7%)	(4.66)	0.0%
[177]	8-Nov-2013	10,077,843	\$31.33	(1.5%)	1.3%	(0.6%)	0.8%	(2.3%)	(2.11)	3.7%
[178]	11-Nov-2013	3,244,043	\$31.51	0.6%	0.1%	(0.6%)	(0.4%)	1.0%	0.88	37.8%
[179]	12-Nov-2013	5,193,576	\$31.43	(0.3%)	(0.2%)	0.1%	(0.3%)	0.1%	0.05	95.7%
[180]	13-Nov-2013	4,161,553	\$31.48	0.2%	0.8%	(0.7%)	0.3%	(0.1%)	(0.09)	92.5%
[181]	14-Nov-2013	4,252,132	\$31.84	1.1%	0.5%	(0.8%)	(0.1%)	1.3%	1.16	24.9%
[182]	15-Nov-2013	3,779,806	\$32.10	0.8%	0.4%	0.2%	0.3%	0.5%	0.47	64.0%
[183]	18-Nov-2013	4,607,338	\$32.19	0.3%	(0.4%)	0.4%	(0.3%)	0.6%	0.52	60.5%
[184]	19-Nov-2013	4,567,618	\$32.01	(0.6%)	(0.2%)	(0.6%)	(0.5%)	(0.0%)	(0.03)	97.7%
[185]	20-Nov-2013	5,437,589	\$31.80	(0.7%)	(0.4%)	(0.6%)	(0.7%)	0.0%	0.00	99.7%
[186]	21-Nov-2013	5,369,796	\$31.08	(0.6%)	0.8%	(0.1%)	0.5%	(1.1%)	(1.03)	30.4%
[187]	22-Nov-2013	4,877,614	\$30.67	(1.3%)	0.5%	(0.9%)	(0.1%)	(1.2%)	(1.10)	27.2%
[188]	25-Nov-2013	5,265,951	\$30.70	0.1%	(0.1%)	(0.2%)	(0.4%)	0.5%	0.45	65.5%
[189]	26-Nov-2013	6,665,553	\$30.68	(0.1%)	0.0%	0.7%	0.2%	(0.3%)	(0.24)	80.9%
[190]	27-Nov-2013	4,176,527	\$30.72	0.1%	0.3%	0.1%	0.1%	0.0%	0.02	98.5%
[191]	29-Nov-2013	2,340,625	\$30.70	(0.1%)	(0.1%)	(0.1%)	(0.3%)	0.2%	0.19	85.2%
[192]	2-Dec-2013	5,119,533	\$30.30	(1.3%)	(0.3%)	(0.8%)	(0.8%)	(0.5%)	(0.52)	60.5%
[193]	3-Dec-2013	5,753,197	\$30.37	0.2%	(0.3%)	0.2%	(0.4%)	0.6%	0.58	56.2%
[194]	4-Dec-2013	6,800,435	\$30.84	1.5%	(0.1%)	(0.1%)	(0.3%)	1.8%	1.76	8.1%
[195]	5-Dec-2013	5,890,680	\$30.65	(0.6%)	(0.4%)	(0.1%)	(0.6%)	(0.0%)	(0.01)	99.5%
[196]	6-Dec-2013	5,759,019	\$31.07	1.4%	1.1%	(0.3%)	0.7%	0.6%	0.60	54.9%
[197]	9-Dec-2013	5,799,462	\$31.52	1.4%	0.2%	(0.3%)	(0.1%)	1.6%	1.49	14.0%
[198]	10-Dec-2013	6,332,872	\$31.51	(0.0%)	(0.3%)	(0.6%)	(0.7%)	0.7%	0.63	52.9%
[199]	11-Dec-2013	7,108,730	\$30.71	(2.5%)	(1.1%)	0.1%	(1.0%)	(1.5%)	(1.41)	16.0%
[200]	12-Dec-2013	5,381,300	\$30.76	0.2%	(0.4%)	0.1%	(0.4%)	0.6%	0.54	58.9%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
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				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[201]	13-Dec-2013	6,050,410	\$30.73	(0.1%)	(0.0%)	0.9%	0.3%	(0.4%)	(0.33)	74.4%
[202]	16-Dec-2013	5,267,531	\$30.95	0.7%	0.6%	(0.6%)	0.1%	0.6%	0.57	57.1%
[203]	17-Dec-2013	6,368,693	\$31.44	1.6%	(0.3%)	0.7%	(0.1%)	1.7%	1.60	11.2%
[204]	18-Dec-2013	7,107,339	\$31.84	1.3%	1.7%	(0.4%)	1.1%	0.2%	0.16	87.5%
[205]	19-Dec-2013	13,236,801	\$31.36	(1.5%)	(0.0%)	1.4%	0.4%	(1.9%)	(1.74)	8.5%
[206]	20-Dec-2013	9,155,762	\$31.04	(1.0%)	0.5%	0.7%	0.5%	(1.5%)	(1.40)	16.4%
[207]	23-Dec-2013	5,691,073	\$31.36	1.0%	0.5%	0.5%	0.4%	0.6%	0.53	59.5%
[208]	24-Dec-2013	2,965,928	\$31.69	1.1%	0.3%	0.4%	0.2%	0.8%	0.76	44.6%
[209]	26-Dec-2013	3,547,160	\$31.85	0.5%	0.5%	0.1%	0.3%	0.2%	0.18	85.6%
[210]	27-Dec-2013	3,690,852	\$32.01	0.5%	(0.0%)	0.5%	0.0%	0.5%	0.44	66.1%
[211]	30-Dec-2013	4,185,689	\$31.96	(0.2%)	(0.0%)	(0.2%)	(0.2%)	0.1%	0.06	95.1%
[212]	31-Dec-2013	5,122,758	\$31.85	(0.3%)	0.4%	(0.2%)	0.2%	(0.5%)	(0.46)	64.9%
[213]	2-Jan-2014	4,446,283	\$31.65	(0.6%)	(0.9%)	(0.5%)	(1.0%)	0.4%	0.37	71.1%
[214]	3-Jan-2014	2,137,339	\$31.60	(0.2%)	(0.0%)	(0.3%)	(0.3%)	0.1%	0.11	91.5%
[215]	6-Jan-2014	2,925,125	\$31.67	0.2%	(0.2%)	0.8%	0.1%	0.1%	0.12	90.8%
[216]	7-Jan-2014	5,040,813	\$31.41	(0.8%)	0.6%	0.2%	0.5%	(1.3%)	(1.19)	23.5%
[217]	8-Jan-2014	4,356,803	\$31.24	(0.5%)	0.0%	(0.1%)	(0.2%)	(0.3%)	(0.32)	75.3%
[218]	9-Jan-2014	4,052,169	\$30.79	(1.4%)	0.0%	(1.7%)	(1.0%)	(0.4%)	(0.35)	73.0%
[219]	10-Jan-2014	3,666,234	\$31.02	0.7%	0.2%	0.2%	0.1%	0.6%	0.56	57.6%
[220]	13-Jan-2014	4,951,794	\$30.87	(0.5%)	(1.2%)	0.3%	(1.1%)	0.6%	0.52	60.5%
[221]	14-Jan-2014	5,584,896	\$30.69	(0.6%)	1.1%	0.1%	0.8%	(1.4%)	(1.26)	20.9%
[222]	15-Jan-2014	11,731,354	\$30.53	(0.5%)	0.5%	0.5%	0.6%	(1.1%)	(0.98)	32.7%
[223]	16-Jan-2014	4,404,416	\$30.33	(0.7%)	(0.1%)	0.4%	(0.0%)	(0.6%)	(0.56)	57.6%
[224]	17-Jan-2014	6,213,716	\$30.00	(1.1%)	(0.4%)	0.5%	(0.2%)	(0.9%)	(0.84)	40.5%
[225]	21-Jan-2014	6,060,770	\$29.85	(0.5%)	0.3%	(0.1%)	(0.0%)	(0.5%)	(0.43)	66.9%

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				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[226]	22-Jan-2014	4,476,142	\$29.50	(1.2%)	0.1%	0.2%	(0.0%)	(1.2%)	(1.07)	28.6%
[227]	23-Jan-2014	6,166,990	\$29.45	(0.2%)	(0.9%)	0.3%	(0.7%)	0.6%	0.51	61.2%
[228]	24-Jan-2014	6,080,409	\$29.15	(1.0%)	(2.1%)	(0.4%)	(2.0%)	1.0%	0.89	37.4%
[229]	27-Jan-2014	7,468,250	\$29.08	(0.2%)	(0.5%)	0.4%	(0.3%)	0.1%	0.06	95.5%
[230]	28-Jan-2014	6,378,807	\$28.95	(0.4%)	0.6%	(0.2%)	0.2%	(0.6%)	(0.56)	57.9%
[231]	29-Jan-2014	7,570,471	\$28.59	(1.2%)	(1.0%)	(0.2%)	(1.1%)	(0.2%)	(0.17)	86.5%
[232]	30-Jan-2014	7,070,543	\$29.16	2.0%	1.1%	(0.5%)	0.3%	1.6%	1.49	13.9%
[233]	31-Jan-2014	6,519,118	\$28.86	(1.0%)	(0.6%)	0.3%	(0.5%)	(0.5%)	(0.51)	61.3%
[234]	3-Feb-2014	6,612,993	\$28.13	(2.5%)	(2.3%)	(1.3%)	(2.7%)	0.2%	0.15	88.5%
[235]	4-Feb-2014	5,374,941	\$28.09	(0.1%)	0.8%	0.2%	0.6%	(0.7%)	(0.74)	46.1%
[236]	5-Feb-2014	4,115,641	\$28.27	0.6%	(0.2%)	0.7%	0.0%	0.6%	0.64	52.5%
[237]	6-Feb-2014	8,104,686	\$28.30	0.1%	1.3%	(1.3%)	0.3%	(0.2%)	(0.22)	82.8%
[238]	7-Feb-2014	4,059,261	\$28.79	1.7%	1.3%	(0.2%)	0.9%	0.9%	0.87	38.4%
[239]	10-Feb-2014	4,284,328	\$28.93	0.5%	0.2%	(0.6%)	(0.3%)	0.8%	0.80	42.4%
[240]	11-Feb-2014	8,416,882	\$29.73	2.8%	1.1%	(0.0%)	0.8%	2.0%	2.03	4.5%
[241]	12-Feb-2014	8,307,185	\$30.19	1.5%	0.0%	0.6%	0.2%	1.4%	1.36	17.5%
[242]	13-Feb-2014	12,193,083	\$30.77	1.9%	0.6%	1.0%	0.9%	1.0%	1.02	30.9%
[243]	14-Feb-2014	6,944,649	\$30.65	(0.4%)	0.5%	(0.6%)	0.0%	(0.4%)	(0.39)	69.6%
[244]	18-Feb-2014	5,995,099	\$30.95	1.0%	0.1%	(0.4%)	(0.2%)	1.2%	1.17	24.3%
[245]	19-Feb-2014	4,886,465	\$30.90	(0.2%)	(0.6%)	0.4%	(0.5%)	0.3%	0.31	75.4%
[246]	20-Feb-2014	3,587,917	\$31.12	0.7%	0.6%	1.0%	0.9%	(0.2%)	(0.20)	84.4%
[247]	21-Feb-2014	6,094,501	\$31.09	(0.1%)	(0.2%)	(0.6%)	(0.6%)	0.5%	0.46	64.5%
[248]	24-Feb-2014	4,717,215	\$31.19	0.3%	0.6%	(0.9%)	0.0%	0.3%	0.29	76.9%
[249]	25-Feb-2014	5,218,198	\$31.14	(0.2%)	(0.1%)	(0.3%)	(0.4%)	0.2%	0.22	82.2%
[250]	26-Feb-2014	5,624,604	\$30.80	(1.1%)	0.0%	(1.1%)	(0.6%)	(0.5%)	(0.53)	59.5%

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				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[251]	27-Feb-2014	6,072,859	\$31.08	0.9%	0.5%	1.1%	0.8%	0.1%	0.07	94.1%
[252]	28-Feb-2014	5,197,792	\$31.26	0.6%	0.3%	(1.9%)	(0.7%)	1.3%	1.25	21.5%
[253]	3-Mar-2014	5,041,610	\$31.11	(0.5%)	(0.7%)	0.8%	(0.4%)	(0.0%)	(0.04)	97.0%
[254]	4-Mar-2014	4,637,747	\$31.53	1.4%	1.5%	0.6%	1.5%	(0.2%)	(0.17)	86.5%
[255]	5-Mar-2014	10,214,777	\$31.86	1.0%	0.0%	(0.4%)	(0.2%)	1.3%	1.31	19.2%
[256]	6-Mar-2014	6,461,975	\$31.19	(0.4%)	0.2%	(0.3%)	(0.0%)	(0.4%)	(0.40)	68.8%
[257]	7-Mar-2014	4,463,090	\$31.32	0.4%	0.1%	(0.5%)	(0.2%)	0.6%	0.63	53.1%
[258]	10-Mar-2014	4,681,172	\$30.83	(1.6%)	(0.0%)	(0.1%)	(0.2%)	(1.4%)	(1.43)	15.5%
[259]	11-Mar-2014	4,331,872	\$30.69	(0.5%)	(0.5%)	0.3%	(0.4%)	(0.0%)	(0.02)	98.3%
[260]	12-Mar-2014	3,206,400	\$30.68	(0.0%)	0.1%	(0.0%)	(0.1%)	0.0%	0.02	98.5%
[261]	13-Mar-2014	3,516,550	\$30.49	(0.6%)	(1.2%)	0.4%	(1.0%)	0.4%	0.37	70.8%
[262]	14-Mar-2014	4,715,718	\$30.62	0.4%	(0.3%)	0.1%	(0.3%)	0.7%	0.72	47.2%
[263]	17-Mar-2014	3,353,245	\$30.84	0.7%	1.0%	0.8%	1.1%	(0.4%)	(0.36)	72.3%
[264]	18-Mar-2014	4,314,222	\$31.40	1.8%	0.7%	0.3%	0.7%	1.2%	1.16	24.7%
[265]	19-Mar-2014	5,326,396	\$31.25	(0.5%)	(0.6%)	0.0%	(0.6%)	0.1%	0.15	88.4%
[266]	20-Mar-2014	5,199,373	\$31.37	0.4%	0.6%	1.2%	0.9%	(0.5%)	(0.52)	60.2%
[267]	21-Mar-2014	10,315,935	\$31.34	(0.1%)	(0.3%)	0.4%	(0.2%)	0.1%	0.08	93.6%
[268]	24-Mar-2014	5,063,542	\$31.54	0.6%	(0.5%)	(0.3%)	(0.6%)	1.3%	1.25	21.3%
[269]	25-Mar-2014	4,344,756	\$31.91	1.2%	0.5%	(0.7%)	0.1%	1.1%	1.06	29.1%
[270]	26-Mar-2014	7,412,896	\$32.29	1.2%	(0.7%)	(0.7%)	(0.9%)	2.1%	2.06	4.2%
[271]	27-Mar-2014	5,043,274	\$32.59	0.9%	(0.2%)	0.7%	0.0%	0.9%	0.88	38.1%
[272]	28-Mar-2014	4,094,012	\$32.68	0.3%	0.5%	0.7%	0.6%	(0.3%)	(0.33)	74.0%
[273]	31-Mar-2014	5,962,182	\$32.84	0.5%	0.8%	0.1%	0.7%	(0.2%)	(0.21)	83.3%
[274]	1-Apr-2014	6,720,547	\$33.08	0.7%	0.7%	1.1%	0.9%	(0.2%)	(0.17)	86.7%
[275]	2-Apr-2014	4,334,427	\$33.18	0.3%	0.3%	(0.2%)	0.2%	0.1%	0.13	89.9%

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ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	t-Statistic	p-Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[276]	3-Apr-2014	5,926,083	\$33.49	0.9%	(0.1%)	(0.7%)	(0.4%)	1.3%	1.32	19.1%
[277]	4-Apr-2014	5,022,768	\$33.69	0.6%	(1.3%)	(0.7%)	(1.3%)	1.8%	1.87	6.4%
[278]	7-Apr-2014	4,694,698	\$33.54	(0.4%)	(1.1%)	(0.3%)	(0.9%)	0.5%	0.49	62.2%
[279]	8-Apr-2014	4,382,875	\$33.94	1.2%	0.4%	1.0%	0.6%	0.6%	0.64	52.1%
[280]	9-Apr-2014	7,824,025	\$33.80	(0.4%)	1.1%	(0.8%)	0.7%	(1.1%)	(1.10)	27.3%
[281]	10-Apr-2014	5,103,068	\$33.43	(1.1%)	(2.1%)	0.1%	(1.6%)	0.5%	0.46	64.7%
[282]	11-Apr-2014	4,443,069	\$33.35	(0.2%)	(0.9%)	(1.1%)	(1.0%)	0.8%	0.76	44.8%
[283]	14-Apr-2014	5,027,993	\$33.88	1.6%	0.8%	(0.4%)	0.5%	1.1%	1.10	27.2%
[284]	15-Apr-2014	5,488,825	\$34.05	0.5%	0.7%	(0.6%)	0.4%	0.1%	0.13	89.6%
[285]	16-Apr-2014	4,915,918	\$34.74	2.0%	1.1%	0.2%	0.8%	1.2%	1.21	23.0%
[286]	17-Apr-2014	4,831,992	\$34.43	(0.9%)	0.1%	0.9%	0.4%	(1.3%)	(1.28)	20.4%
[287]	21-Apr-2014	2,181,744	\$34.49	0.2%	0.4%	(0.4%)	0.2%	(0.0%)	(0.03)	97.9%
[288]	22-Apr-2014	3,171,599	\$34.45	(0.1%)	0.4%	0.5%	0.5%	(0.6%)	(0.59)	55.6%
[289]	23-Apr-2014	5,545,716	\$34.61	0.5%	(0.2%)	(1.0%)	(0.4%)	0.9%	0.86	39.1%
[290]	24-Apr-2014	4,216,363	\$34.63	0.1%	0.2%	(1.1%)	(0.1%)	0.2%	0.16	87.4%
[291]	25-Apr-2014	3,758,085	\$34.76	0.4%	(0.8%)	(0.8%)	(0.8%)	1.2%	1.16	24.8%
[292]	28-Apr-2014	4,895,210	\$34.64	(0.3%)	0.3%	(0.5%)	0.2%	(0.5%)	(0.51)	61.3%
[293]	29-Apr-2014	3,407,922	\$34.80	0.5%	0.5%	0.9%	0.5%	(0.1%)	(0.09)	93.1%
[294]	30-Apr-2014	3,440,614	\$34.91	0.3%	0.3%	1.5%	0.5%	(0.2%)	(0.20)	84.0%
[295]	1-May-2014	2,702,517	\$34.96	0.1%	(0.0%)	1.0%	0.2%	(0.1%)	(0.05)	95.8%
[296]	2-May-2014	3,654,508	\$34.83	(0.4%)	(0.1%)	0.6%	0.0%	(0.4%)	(0.42)	67.4%
[297]	5-May-2014	3,302,088	\$34.84	0.0%	0.2%	(0.1%)	0.2%	(0.1%)	(0.17)	86.2%
[298]	6-May-2014	4,692,085	\$34.46	(1.1%)	(0.9%)	(0.8%)	(0.6%)	(0.5%)	(0.60)	54.8%
[299]	7-May-2014	6,623,396	\$34.65	0.6%	0.6%	(0.6%)	0.4%	0.1%	0.16	87.4%
[300]	8-May-2014	21,617,627	\$36.86	6.4%	(0.1%)	0.4%	0.0%	6.3%	7.86	0.0%

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ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	t-Statistic	p-Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[301]	9-May-2014	7,794,610	\$36.56	(0.8%)	0.2%	0.9%	0.4%	(1.2%)	(1.19)	23.7%
[302]	12-May-2014	5,464,724	\$36.74	0.5%	1.0%	(0.1%)	0.8%	(0.3%)	(0.26)	79.6%
[303]	13-May-2014	6,557,744	\$36.97	0.6%	0.1%	(0.5%)	0.1%	0.5%	0.54	58.7%
[304]	14-May-2014	7,681,031	\$37.66	1.9%	(0.5%)	(0.1%)	(0.2%)	2.1%	2.06	4.1%
[305]	15-May-2014	8,250,336	\$37.83	0.5%	(0.9%)	1.1%	(0.3%)	0.8%	0.75	45.4%
[306]	16-May-2014	4,521,544	\$38.18	0.9%	0.4%	(0.2%)	0.4%	0.6%	0.56	57.7%
[307]	19-May-2014	7,759,823	\$37.97	(0.6%)	0.4%	(0.0%)	0.4%	(1.0%)	(0.95)	34.6%
[308]	20-May-2014	5,862,582	\$37.58	(1.0%)	(0.6%)	(1.4%)	(0.4%)	(0.6%)	(0.63)	53.1%
[309]	21-May-2014	5,438,413	\$37.17	(1.1%)	0.8%	(0.7%)	0.6%	(1.7%)	(1.69)	9.3%
[310]	22-May-2014	5,594,294	\$37.15	(0.1%)	0.3%	0.8%	0.4%	(0.5%)	(0.47)	64.1%
[311]	23-May-2014	3,384,959	\$37.28	0.3%	0.4%	0.4%	0.5%	(0.1%)	(0.12)	90.8%
[312]	27-May-2014	3,685,572	\$37.32	0.1%	0.6%	(0.6%)	0.5%	(0.3%)	(0.33)	73.8%
[313]	28-May-2014	4,083,051	\$37.80	1.3%	(0.1%)	0.5%	0.1%	1.1%	1.12	26.5%
[314]	29-May-2014	4,049,970	\$37.68	(0.3%)	0.5%	(0.1%)	0.5%	(0.8%)	(0.80)	42.5%
[315]	30-May-2014	3,946,026	\$37.67	(0.0%)	0.2%	0.2%	0.3%	(0.3%)	(0.31)	75.8%
[316]	2-Jun-2014	2,658,269	\$37.62	(0.1%)	0.1%	(1.0%)	0.1%	(0.2%)	(0.19)	84.6%
[317]	3-Jun-2014	4,630,207	\$38.03	1.1%	(0.0%)	(0.6%)	0.0%	1.1%	1.04	30.1%
[318]	4-Jun-2014	3,978,489	\$38.03	-	0.2%	(0.3%)	0.2%	(0.2%)	(0.23)	82.2%
[319]	5-Jun-2014	5,007,248	\$37.18	(0.8%)	0.7%	(0.1%)	0.5%	(1.3%)	(1.32)	19.0%
[320]	6-Jun-2014	3,785,554	\$36.91	(0.7%)	0.5%	(0.7%)	0.3%	(1.0%)	(1.04)	30.1%
[321]	9-Jun-2014	3,488,328	\$36.87	(0.1%)	0.1%	0.5%	0.3%	(0.4%)	(0.37)	71.3%
[322]	10-Jun-2014	3,444,107	\$36.93	0.2%	(0.0%)	(0.5%)	0.0%	0.1%	0.12	90.7%
[323]	11-Jun-2014	3,854,123	\$36.43	(1.4%)	(0.3%)	(0.4%)	(0.1%)	(1.2%)	(1.24)	21.8%
[324]	12-Jun-2014	2,960,166	\$36.39	(0.1%)	(0.7%)	0.0%	(0.3%)	0.2%	0.16	87.5%
[325]	13-Jun-2014	3,458,077	\$36.95	1.5%	0.3%	1.2%	0.5%	1.1%	1.07	28.6%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[326]	16-Jun-2014	2,710,018	\$37.06	0.3%	0.1%	(0.4%)	0.1%	0.2%	0.22	82.9%
[327]	17-Jun-2014	3,192,739	\$36.62	(1.2%)	0.2%	0.4%	0.4%	(1.6%)	(1.59)	11.3%
[328]	18-Jun-2014	2,257,863	\$36.93	0.8%	0.8%	0.7%	0.7%	0.1%	0.14	88.7%
[329]	19-Jun-2014	2,700,975	\$37.29	1.0%	0.1%	(0.1%)	0.2%	0.8%	0.81	41.8%
[330]	20-Jun-2014	5,038,562	\$36.70	(1.6%)	0.2%	(0.1%)	0.2%	(1.8%)	(1.80)	7.4%
[331]	23-Jun-2014	2,348,210	\$36.73	0.1%	(0.0%)	0.4%	0.2%	(0.1%)	(0.11)	91.3%
[332]	24-Jun-2014	2,644,880	\$36.36	(1.0%)	(0.6%)	0.1%	(0.2%)	(0.8%)	(0.79)	43.1%
[333]	25-Jun-2014	3,883,852	\$36.15	(0.6%)	0.5%	0.3%	0.4%	(1.0%)	(1.02)	30.8%
[334]	26-Jun-2014	2,913,857	\$36.16	0.0%	(0.1%)	0.0%	0.1%	(0.0%)	(0.03)	97.7%
[335]	27-Jun-2014	4,245,253	\$35.78	(1.1%)	0.2%	0.4%	0.3%	(1.4%)	(1.35)	17.8%
[336]	30-Jun-2014	2,820,478	\$36.20	1.2%	(0.0%)	0.5%	0.2%	1.0%	0.99	32.4%
[337]	1-Jul-2014	2,351,079	\$36.32	0.3%	0.7%	(0.3%)	0.4%	(0.1%)	(0.10)	92.0%
[338]	2-Jul-2014	4,105,462	\$35.94	(1.0%)	0.1%	0.1%	0.2%	(1.2%)	(1.22)	22.6%
[339]	3-Jul-2014	2,071,595	\$36.08	0.4%	0.5%	0.2%	0.5%	(0.1%)	(0.07)	94.8%
[340]	7-Jul-2014	2,077,144	\$36.12	0.1%	(0.4%)	(0.1%)	(0.1%)	0.2%	0.23	81.9%
[341]	8-Jul-2014	3,767,060	\$36.50	1.1%	(0.7%)	(0.6%)	(0.4%)	1.4%	1.39	16.8%
[342]	9-Jul-2014	4,921,591	\$36.59	0.2%	0.5%	0.2%	0.4%	(0.2%)	(0.18)	85.7%
[343]	10-Jul-2014	3,474,103	\$36.78	0.5%	(0.4%)	0.3%	(0.0%)	0.6%	0.56	57.5%
[344]	11-Jul-2014	1,672,723	\$36.77	(0.0%)	0.2%	0.6%	0.3%	(0.4%)	(0.37)	70.9%
[345]	14-Jul-2014	2,284,000	\$36.89	0.3%	0.5%	(0.3%)	0.4%	(0.1%)	(0.06)	95.2%
[346]	15-Jul-2014	4,163,555	\$36.99	0.3%	(0.2%)	(0.4%)	(0.0%)	0.3%	0.28	78.3%
[347]	16-Jul-2014	4,220,308	\$37.12	0.4%	0.4%	0.0%	0.4%	(0.1%)	(0.08)	93.5%
[348]	17-Jul-2014	1,906,272	\$36.72	(1.1%)	(1.2%)	0.1%	(0.4%)	(0.6%)	(0.63)	53.0%
[349]	18-Jul-2014	2,058,629	\$36.95	0.6%	1.0%	(0.2%)	0.7%	(0.1%)	(0.10)	92.2%
[350]	21-Jul-2014	3,000,413	\$37.02	0.2%	(0.2%)	(0.6%)	(0.1%)	0.3%	0.25	80.0%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	t-Statistic	p-Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[351]	22-Jul-2014	2,846,177	\$37.31	0.8%	0.5%	(0.1%)	0.5%	0.3%	0.33	74.4%
[352]	23-Jul-2014	3,176,761	\$37.57	0.7%	0.2%	(0.2%)	0.3%	0.4%	0.45	65.6%
[353]	24-Jul-2014	2,263,214	\$37.68	0.3%	0.1%	0.6%	0.3%	(0.0%)	(0.03)	97.3%
[354]	25-Jul-2014	2,122,589	\$37.58	(0.3%)	(0.5%)	0.3%	0.0%	(0.3%)	(0.29)	77.1%
[355]	28-Jul-2014	3,858,663	\$37.71	0.3%	0.0%	(0.0%)	0.2%	0.1%	0.12	90.8%
[356]	29-Jul-2014	51,803,366	\$39.90	5.8%	(0.4%)	3.6%	0.6%	5.2%	4.76	0.0%
[357]	30-Jul-2014	8,045,896	\$39.77	(0.3%)	0.0%	(0.1%)	0.3%	(0.6%)	(0.55)	58.1%
[358]	31-Jul-2014	8,057,352	\$39.24	(1.3%)	(2.0%)	0.2%	(0.4%)	(0.9%)	(0.84)	40.5%
[359]	1-Aug-2014	4,679,242	\$39.06	(0.5%)	(0.3%)	(0.3%)	0.0%	(0.5%)	(0.46)	64.8%
[360]	4-Aug-2014	3,985,921	\$39.46	1.0%	0.7%	(1.1%)	0.0%	1.0%	0.96	33.9%
[361]	5-Aug-2014	3,797,639	\$39.29	(0.4%)	(1.0%)	1.7%	0.7%	(1.1%)	(1.05)	29.6%
[362]	6-Aug-2014	3,467,618	\$38.77	(1.3%)	0.0%	(2.4%)	(0.8%)	(0.5%)	(0.47)	63.9%
[363]	7-Aug-2014	4,882,082	\$38.95	0.5%	(0.5%)	(0.4%)	(0.1%)	0.6%	0.59	55.4%
[364]	8-Aug-2014	5,045,437	\$39.86	2.3%	1.2%	(1.0%)	0.2%	2.1%	2.03	4.5%
[365]	11-Aug-2014	5,237,163	\$40.27	1.0%	0.3%	0.2%	0.4%	0.6%	0.60	55.0%
[366]	12-Aug-2014	5,161,187	\$40.77	1.2%	(0.2%)	0.4%	0.3%	0.9%	0.86	38.9%
[367]	13-Aug-2014	5,806,201	\$40.47	(0.7%)	0.7%	(0.5%)	0.3%	(1.1%)	(1.00)	32.0%
[368]	14-Aug-2014	3,504,532	\$40.51	0.1%	0.4%	(0.2%)	0.3%	(0.2%)	(0.22)	82.9%
[369]	15-Aug-2014	3,481,143	\$40.40	(0.3%)	0.0%	0.0%	0.2%	(0.5%)	(0.48)	63.0%
[370]	18-Aug-2014	2,704,021	\$40.42	0.0%	0.9%	(0.3%)	0.4%	(0.4%)	(0.33)	74.0%
[371]	19-Aug-2014	2,027,596	\$40.66	0.6%	0.5%	(0.9%)	0.1%	0.5%	0.50	62.1%
[372]	20-Aug-2014	3,056,329	\$40.79	0.3%	0.3%	0.0%	0.3%	(0.0%)	(0.01)	99.3%
[373]	21-Aug-2014	3,367,515	\$40.91	0.3%	0.3%	(0.2%)	0.3%	0.0%	0.03	98.0%
[374]	22-Aug-2014	1,860,889	\$40.80	(0.3%)	(0.2%)	0.3%	0.3%	(0.6%)	(0.54)	59.2%
[375]	25-Aug-2014	3,472,700	\$41.27	1.2%	0.5%	0.0%	0.4%	0.7%	0.71	47.6%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Return	Return	Abnormal	t-Statistic	p-Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[376]	26-Aug-2014	2,574,155	\$41.14	(0.3%)	0.1%	0.3%	0.4%	(0.7%)	(0.69)	49.4%
[377]	27-Aug-2014	2,306,702	\$40.76	0.4%	0.0%	0.6%	0.5%	(0.1%)	(0.10)	92.0%
[378]	28-Aug-2014	2,738,159	\$40.86	0.2%	(0.2%)	(0.0%)	0.2%	0.1%	0.08	93.6%
[379]	29-Aug-2014	2,500,622	\$40.99	0.3%	0.3%	0.4%	0.5%	(0.2%)	(0.20)	84.3%
[380]	2-Sep-2014	3,422,613	\$40.86	(0.3%)	(0.0%)	0.1%	0.3%	(0.6%)	(0.56)	58.0%
[381]	3-Sep-2014	2,855,259	\$41.02	0.4%	(0.1%)	0.1%	0.3%	0.1%	0.12	90.6%
[382]	4-Sep-2014	3,624,736	\$41.06	0.1%	(0.2%)	0.1%	0.2%	(0.2%)	(0.15)	88.3%
[383]	5-Sep-2014	3,061,319	\$41.47	1.0%	0.5%	0.3%	0.6%	0.4%	0.42	67.3%
[384]	8-Sep-2014	7,919,078	\$40.58	(2.1%)	(0.3%)	0.4%	0.3%	(2.5%)	(2.42)	1.7%
[385]	9-Sep-2014	6,052,736	\$39.99	(1.5%)	(0.7%)	(0.5%)	(0.2%)	(1.3%)	(1.20)	23.2%
[386]	10-Sep-2014	3,905,173	\$39.69	(0.8%)	0.4%	(0.4%)	0.2%	(0.9%)	(0.86)	39.3%
[387]	11-Sep-2014	5,115,581	\$40.38	1.7%	0.1%	0.8%	0.6%	1.1%	1.07	28.8%
[388]	12-Sep-2014	5,540,258	\$39.54	(2.1%)	(0.6%)	0.8%	0.4%	(2.5%)	(2.33)	2.1%
[389]	15-Sep-2014	3,200,475	\$39.64	0.3%	(0.1%)	(1.6%)	(0.5%)	0.8%	0.70	48.5%
[390]	16-Sep-2014	4,007,351	\$39.60	(0.1%)	0.7%	(0.1%)	0.4%	(0.5%)	(0.48)	63.5%
[391]	17-Sep-2014	4,773,923	\$40.35	1.9%	0.1%	0.3%	0.4%	1.5%	1.43	15.5%
[392]	18-Sep-2014	2,372,517	\$40.52	0.4%	0.5%	0.3%	0.5%	(0.1%)	(0.08)	93.3%
[393]	19-Sep-2014	3,482,965	\$40.75	0.6%	(0.0%)	0.3%	0.3%	0.3%	0.25	80.2%
[394]	22-Sep-2014	2,778,036	\$40.79	0.1%	(0.8%)	(0.2%)	(0.2%)	0.3%	0.31	75.8%
[395]	23-Sep-2014	2,646,435	\$40.46	(0.8%)	(0.6%)	(0.4%)	(0.2%)	(0.6%)	(0.55)	58.1%
[396]	24-Sep-2014	3,452,837	\$40.44	(0.0%)	0.8%	(0.3%)	0.3%	(0.4%)	(0.35)	72.7%
[397]	25-Sep-2014	2,857,294	\$39.91	(1.3%)	(1.6%)	(0.3%)	(0.6%)	(0.7%)	(0.64)	52.1%
[398]	26-Sep-2014	2,785,176	\$40.31	1.0%	0.9%	(0.1%)	0.5%	0.5%	0.46	64.4%
[399]	29-Sep-2014	3,763,075	\$40.40	0.2%	(0.2%)	0.0%	0.1%	0.2%	0.16	87.4%
[400]	30-Sep-2014	3,303,817	\$40.89	1.2%	(0.3%)	0.1%	0.1%	1.1%	1.07	28.8%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[401]	1-Oct-2014	2,943,935	\$40.42	(1.1%)	(1.3%)	(0.7%)	(0.8%)	(0.3%)	(0.31)	75.5%
[402]	2-Oct-2014	2,542,464	\$40.76	0.8%	0.0%	0.5%	0.4%	0.4%	0.40	68.8%
[403]	3-Oct-2014	2,497,727	\$41.00	0.6%	1.1%	(0.3%)	0.6%	0.0%	0.03	97.3%
[404]	6-Oct-2014	3,092,155	\$40.68	(0.8%)	(0.2%)	(0.6%)	(0.2%)	(0.5%)	(0.51)	61.2%
[405]	7-Oct-2014	2,993,803	\$40.08	(1.5%)	(1.5%)	0.7%	(0.2%)	(1.3%)	(1.19)	23.7%
[406]	8-Oct-2014	3,066,336	\$40.82	1.8%	1.8%	(1.0%)	0.4%	1.4%	1.27	20.6%
[407]	9-Oct-2014	3,002,769	\$39.73	(2.7%)	(2.1%)	(1.0%)	(1.4%)	(1.3%)	(1.14)	25.5%
[408]	10-Oct-2014	3,339,596	\$39.13	(1.5%)	(1.1%)	(1.0%)	(1.1%)	(0.5%)	(0.41)	68.1%
[409]	13-Oct-2014	4,048,675	\$38.41	(1.8%)	(1.6%)	0.5%	(0.6%)	(1.2%)	(1.11)	26.9%
[410]	14-Oct-2014	3,825,142	\$38.83	1.1%	0.2%	1.0%	0.8%	0.3%	0.30	76.4%
[411]	15-Oct-2014	4,023,846	\$38.61	(0.6%)	(0.8%)	1.5%	0.5%	(1.0%)	(0.96)	34.1%
[412]	16-Oct-2014	4,020,397	\$38.30	(0.8%)	0.0%	0.1%	0.2%	(1.0%)	(0.95)	34.6%
[413]	17-Oct-2014	3,894,947	\$38.86	1.5%	1.3%	(0.1%)	0.9%	0.6%	0.52	60.1%
[414]	20-Oct-2014	2,033,907	\$39.28	1.1%	0.9%	0.2%	0.8%	0.3%	0.24	81.5%
[415]	21-Oct-2014	2,490,502	\$39.70	1.1%	2.0%	(0.3%)	1.3%	(0.2%)	(0.21)	83.8%
[416]	22-Oct-2014	2,118,129	\$40.09	1.0%	(0.7%)	(0.4%)	(0.6%)	1.6%	1.47	14.4%
[417]	23-Oct-2014	2,035,652	\$39.94	(0.4%)	1.2%	(0.3%)	0.8%	(1.1%)	(1.05)	29.5%
[418]	24-Oct-2014	2,660,126	\$39.93	(0.0%)	0.7%	(0.2%)	0.4%	(0.4%)	(0.41)	68.1%
[419]	27-Oct-2014	2,150,164	\$40.40	1.2%	(0.1%)	0.8%	0.5%	0.7%	0.62	53.7%
[420]	28-Oct-2014	1,930,936	\$41.03	1.6%	1.2%	1.0%	1.5%	0.1%	0.08	93.8%
[421]	29-Oct-2014	1,918,300	\$40.99	(0.1%)	(0.1%)	(0.2%)	(0.1%)	(0.0%)	(0.01)	99.2%
[422]	30-Oct-2014	1,933,926	\$41.49	1.2%	0.6%	0.1%	0.6%	0.7%	0.72	47.4%
[423]	31-Oct-2014	3,770,735	\$41.48	(0.0%)	1.2%	0.4%	1.1%	(1.1%)	(1.21)	22.8%
[424]	3-Nov-2014	2,222,062	\$41.81	0.8%	(0.0%)	0.2%	0.2%	0.6%	0.64	52.4%
[425]	4-Nov-2014	1,894,544	\$41.63	(0.4%)	(0.3%)	(0.5%)	(0.4%)	(0.0%)	(0.03)	97.4%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[426]	5-Nov-2014	2,699,032	\$41.65	0.0%	0.6%	(0.9%)	(0.1%)	0.2%	0.17	86.4%
[427]	6-Nov-2014	8,155,493	\$39.00	(6.4%)	0.4%	(1.4%)	(0.5%)	(5.8%)	(6.45)	0.0%
[428]	7-Nov-2014	6,073,176	\$39.43	1.1%	0.1%	0.9%	0.7%	0.4%	0.34	73.3%
[429]	10-Nov-2014	3,590,710	\$39.84	1.0%	0.3%	0.5%	0.6%	0.4%	0.41	68.0%
[430]	11-Nov-2014	2,487,437	\$39.97	0.3%	0.1%	(0.1%)	0.0%	0.3%	0.29	77.5%
[431]	12-Nov-2014	3,113,603	\$40.50	1.3%	(0.0%)	1.0%	0.9%	0.5%	0.46	64.5%
[432]	13-Nov-2014	2,607,747	\$40.92	1.0%	0.1%	0.1%	0.2%	0.8%	0.82	41.3%
[433]	14-Nov-2014	2,203,142	\$40.79	(0.3%)	0.0%	0.8%	0.8%	(1.1%)	(1.04)	30.0%
[434]	17-Nov-2014	2,548,045	\$40.95	0.4%	0.1%	(1.0%)	(0.6%)	1.0%	1.01	31.4%
[435]	18-Nov-2014	2,211,575	\$41.09	0.3%	0.5%	(0.4%)	0.1%	0.3%	0.25	80.3%
[436]	19-Nov-2014	2,649,839	\$41.12	0.1%	(0.1%)	(0.9%)	(0.7%)	0.8%	0.79	43.0%
[437]	20-Nov-2014	2,756,297	\$40.50	(0.2%)	0.2%	0.1%	0.3%	(0.4%)	(0.44)	66.4%
[438]	21-Nov-2014	3,902,001	\$40.47	(0.1%)	0.5%	0.0%	0.4%	(0.5%)	(0.49)	62.5%
[439]	24-Nov-2014	2,767,932	\$40.28	(0.5%)	0.3%	(0.3%)	0.0%	(0.5%)	(0.49)	62.7%
[440]	25-Nov-2014	4,870,020	\$39.69	(1.5%)	(0.1%)	0.1%	0.1%	(1.5%)	(1.50)	13.5%
[441]	26-Nov-2014	2,565,847	\$40.57	2.2%	0.3%	0.8%	0.9%	1.3%	1.32	19.1%
[442]	28-Nov-2014	1,337,844	\$40.77	0.5%	(0.2%)	0.4%	0.2%	0.3%	0.27	79.0%
[443]	1-Dec-2014	3,648,241	\$41.10	0.8%	(0.7%)	(0.9%)	(1.2%)	2.0%	1.89	6.1%
[444]	2-Dec-2014	4,086,908	\$40.72	(0.9%)	0.6%	(1.8%)	(0.9%)	(0.0%)	(0.04)	97.1%
[445]	3-Dec-2014	4,758,746	\$40.06	(1.6%)	0.4%	(0.6%)	(0.1%)	(1.5%)	(1.42)	15.9%
[446]	4-Dec-2014	3,527,638	\$40.05	(0.0%)	(0.1%)	(0.2%)	(0.1%)	0.1%	0.11	90.9%
[447]	5-Dec-2014	3,106,620	\$39.68	(0.9%)	0.2%	0.1%	0.2%	(1.1%)	(1.09)	27.8%
[448]	8-Dec-2014	2,721,614	\$39.77	0.2%	(0.7%)	(0.4%)	(0.7%)	1.0%	0.92	36.1%
[449]	9-Dec-2014	3,224,288	\$39.10	(1.7%)	(0.0%)	(1.2%)	(0.9%)	(0.8%)	(0.73)	46.5%
[450]	10-Dec-2014	2,901,101	\$38.40	(1.8%)	(1.6%)	(1.0%)	(1.8%)	(0.0%)	(0.03)	97.3%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[451]	11-Dec-2014	2,042,830	\$38.80	1.0%	0.5%	0.5%	0.8%	0.3%	0.25	79.9%
[452]	12-Dec-2014	3,533,777	\$37.58	(3.1%)	(1.6%)	(0.7%)	(1.6%)	(1.6%)	(1.51)	13.4%
[453]	15-Dec-2014	3,685,440	\$37.78	0.5%	(0.6%)	0.6%	0.1%	0.4%	0.42	67.3%
[454]	16-Dec-2014	3,856,590	\$37.89	0.3%	(0.8%)	0.9%	0.2%	0.1%	0.11	91.1%
[455]	17-Dec-2014	2,894,587	\$38.69	2.1%	2.0%	0.6%	2.0%	0.1%	0.12	90.5%
[456]	18-Dec-2014	3,127,366	\$39.48	2.0%	2.4%	0.3%	2.0%	(0.0%)	(0.01)	99.5%
[457]	19-Dec-2014	4,133,051	\$39.70	0.6%	0.5%	0.3%	0.6%	(0.1%)	(0.05)	95.8%
[458]	22-Dec-2014	2,419,168	\$40.19	1.2%	0.4%	0.1%	0.5%	0.8%	0.75	45.5%
[459]	23-Dec-2014	1,615,878	\$40.23	0.1%	0.2%	0.0%	0.2%	(0.1%)	(0.13)	89.5%
[460]	24-Dec-2014	887,602	\$40.18	(0.1%)	(0.0%)	0.1%	0.1%	(0.3%)	(0.25)	79.9%
[461]	26-Dec-2014	1,377,826	\$40.48	0.7%	0.3%	0.9%	1.1%	(0.3%)	(0.33)	74.3%
[462]	29-Dec-2014	2,047,890	\$40.53	0.1%	0.1%	(0.2%)	(0.0%)	0.1%	0.13	89.8%
[463]	30-Dec-2014	1,870,680	\$40.09	(1.1%)	(0.5%)	(0.5%)	(0.7%)	(0.4%)	(0.39)	69.8%
[464]	31-Dec-2014	1,695,636	\$39.58	(1.3%)	(1.0%)	0.0%	(0.7%)	(0.6%)	(0.57)	56.8%
[465]	2-Jan-2015	2,203,929	\$39.59	0.0%	(0.0%)	0.3%	0.3%	(0.3%)	(0.31)	75.4%
[466]	5-Jan-2015	3,036,874	\$38.75	(2.1%)	(1.8%)	(0.4%)	(1.7%)	(0.4%)	(0.44)	66.2%
[467]	6-Jan-2015	4,186,158	\$38.27	(1.2%)	(0.9%)	(0.4%)	(1.0%)	(0.3%)	(0.25)	80.1%
[468]	7-Jan-2015	3,642,759	\$38.47	0.5%	1.2%	(0.6%)	0.5%	0.0%	0.04	96.8%
[469]	8-Jan-2015	2,882,255	\$38.86	1.0%	1.8%	0.2%	1.7%	(0.6%)	(0.64)	52.6%
[470]	9-Jan-2015	2,180,248	\$38.40	(1.2%)	(0.8%)	0.1%	(0.5%)	(0.7%)	(0.67)	50.6%
[471]	12-Jan-2015	2,586,849	\$38.65	0.7%	(0.8%)	1.4%	0.6%	0.0%	0.02	98.2%
[472]	13-Jan-2015	3,282,626	\$38.60	(0.1%)	(0.2%)	0.7%	0.5%	(0.6%)	(0.62)	53.5%
[473]	14-Jan-2015	2,607,390	\$38.31	(0.8%)	(0.6%)	0.2%	(0.2%)	(0.5%)	(0.56)	57.9%
[474]	15-Jan-2015	3,149,255	\$38.30	(0.0%)	(0.9%)	(0.3%)	(0.9%)	0.9%	0.90	36.7%
[475]	16-Jan-2015	4,558,435	\$38.40	0.3%	1.3%	0.6%	1.6%	(1.3%)	(1.32)	18.8%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	t-Statistic	p-Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[476]	20-Jan-2015	2,498,302	\$38.74	0.9%	0.2%	0.3%	0.4%	0.5%	0.47	63.8%
[477]	21-Jan-2015	3,483,161	\$38.63	(0.3%)	0.5%	0.1%	0.5%	(0.7%)	(0.79)	43.3%
[478]	22-Jan-2015	3,538,262	\$39.37	1.9%	1.5%	(0.5%)	0.8%	1.1%	1.13	26.0%
[479]	23-Jan-2015	2,984,939	\$39.24	(0.3%)	(0.5%)	(0.2%)	(0.6%)	0.3%	0.29	77.6%
[480]	26-Jan-2015	2,556,616	\$39.00	(0.6%)	0.3%	0.4%	0.5%	(1.1%)	(1.13)	25.9%
[481]	27-Jan-2015	3,018,176	\$38.79	(0.5%)	(1.3%)	0.2%	(1.0%)	0.4%	0.44	66.4%
[482]	28-Jan-2015	2,758,673	\$38.35	(1.1%)	(1.3%)	0.3%	(0.9%)	(0.3%)	(0.27)	79.1%
[483]	29-Jan-2015	5,231,057	\$37.50	(2.2%)	1.0%	(0.9%)	0.1%	(2.3%)	(2.42)	1.7%
[484]	30-Jan-2015	7,269,765	\$37.17	(0.9%)	(1.3%)	(0.1%)	(1.1%)	0.3%	0.27	78.5%
[485]	2-Feb-2015	4,684,915	\$38.22	2.8%	1.3%	0.7%	1.5%	1.3%	1.36	17.5%
[486]	3-Feb-2015	5,637,870	\$39.59	3.6%	1.4%	1.1%	2.0%	1.6%	1.62	10.8%
[487]	4-Feb-2015	3,856,682	\$39.41	(0.5%)	(0.4%)	0.4%	(0.0%)	(0.4%)	(0.46)	64.4%
[488]	5-Feb-2015	5,445,432	\$38.43	(2.5%)	1.0%	0.5%	1.3%	(3.8%)	(3.91)	0.0%
[489]	6-Feb-2015	3,626,682	\$38.56	0.3%	(0.3%)	0.6%	0.2%	0.1%	0.12	90.5%
[490]	9-Feb-2015	11,608,076	\$39.67	2.9%	(0.4%)	0.2%	(0.2%)	3.1%	3.03	0.3%
[491]	10-Feb-2015	5,651,826	\$40.18	1.3%	1.1%	(0.1%)	0.7%	0.6%	0.55	58.5%
[492]	11-Feb-2015	5,111,313	\$40.52	0.8%	0.0%	0.4%	0.3%	0.5%	0.50	61.9%
[493]	12-Feb-2015	12,709,861	\$39.29	(3.0%)	1.0%	(0.1%)	0.6%	(3.7%)	(3.47)	0.1%
[494]	13-Feb-2015	4,680,862	\$39.46	0.4%	0.4%	0.0%	0.3%	0.2%	0.15	88.3%
[495]	17-Feb-2015	4,018,714	\$39.23	(0.6%)	0.2%	(0.1%)	0.0%	(0.6%)	(0.54)	58.9%
[496]	18-Feb-2015	10,148,625	\$37.51	(4.4%)	(0.0%)	(0.5%)	(0.5%)	(3.9%)	(3.50)	0.1%
[497]	19-Feb-2015	4,837,612	\$37.59	0.2%	(0.1%)	(0.3%)	(0.5%)	0.7%	0.58	56.5%
[498]	20-Feb-2015	6,748,371	\$37.02	(1.5%)	0.6%	0.3%	0.6%	(2.1%)	(1.82)	7.1%
[499]	23-Feb-2015	4,678,707	\$36.63	(1.1%)	(0.0%)	(0.8%)	(0.8%)	(0.2%)	(0.18)	85.8%
[500]	24-Feb-2015	3,960,731	\$37.06	1.2%	0.3%	(0.5%)	(0.4%)	1.6%	1.31	19.1%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[501]	25-Feb-2015	3,045,561	\$37.30	0.6%	(0.1%)	1.3%	1.0%	(0.4%)	(0.29)	77.1%
[502]	26-Feb-2015	4,527,963	\$37.40	0.3%	(0.1%)	(0.1%)	(0.3%)	0.6%	0.50	62.1%
[503]	27-Feb-2015	4,971,031	\$37.86	1.2%	(0.3%)	0.9%	0.4%	0.8%	0.67	50.7%
[504]	2-Mar-2015	4,453,160	\$37.63	(0.6%)	0.6%	(0.2%)	0.2%	(0.8%)	(0.67)	50.5%
[505]	3-Mar-2015	3,602,311	\$37.68	0.1%	(0.5%)	0.4%	(0.0%)	0.1%	0.13	90.0%
[506]	4-Mar-2015	6,490,233	\$36.25	(2.4%)	(0.4%)	(0.2%)	(0.6%)	(1.8%)	(1.52)	13.2%
[507]	5-Mar-2015	4,595,649	\$36.13	(0.3%)	0.1%	0.3%	0.3%	(0.6%)	(0.55)	58.5%
[508]	6-Mar-2015	3,920,300	\$35.42	(2.0%)	(1.4%)	(0.3%)	(1.3%)	(0.6%)	(0.53)	59.4%
[509]	9-Mar-2015	3,639,731	\$35.23	(0.5%)	0.4%	(0.1%)	0.1%	(0.7%)	(0.59)	55.9%
[510]	10-Mar-2015	3,482,898	\$35.13	(0.3%)	(1.7%)	(0.2%)	(1.5%)	1.2%	1.03	30.6%
[511]	11-Mar-2015	3,019,831	\$35.29	0.5%	(0.2%)	0.6%	0.4%	0.1%	0.09	93.2%
[512]	12-Mar-2015	4,003,351	\$35.21	(0.2%)	1.3%	0.4%	1.2%	(1.4%)	(1.19)	23.6%
[513]	13-Mar-2015	7,162,632	\$34.42	(2.2%)	(0.6%)	(0.0%)	(0.6%)	(1.7%)	(1.47)	14.5%
[514]	16-Mar-2015	5,760,632	\$34.50	0.2%	1.4%	(0.4%)	0.4%	(0.2%)	(0.19)	85.3%
[515]	17-Mar-2015	6,148,021	\$35.13	1.8%	(0.3%)	0.3%	(0.1%)	1.9%	1.67	9.8%
[516]	18-Mar-2015	7,454,842	\$35.12	(0.0%)	1.2%	0.9%	1.6%	(1.6%)	(1.38)	17.1%
[517]	19-Mar-2015	3,239,140	\$34.86	(0.7%)	(0.5%)	0.0%	(0.4%)	(0.3%)	(0.25)	80.1%
[518]	20-Mar-2015	9,318,013	\$35.30	1.3%	0.9%	0.3%	0.7%	0.5%	0.43	66.5%
[519]	23-Mar-2015	5,637,183	\$35.32	0.1%	(0.2%)	0.9%	0.6%	(0.6%)	(0.47)	64.1%
[520]	24-Mar-2015	3,342,190	\$35.19	(0.4%)	(0.6%)	(0.4%)	(0.9%)	0.5%	0.44	66.1%
[521]	25-Mar-2015	2,830,852	\$34.64	(1.6%)	(1.5%)	(1.0%)	(2.1%)	0.5%	0.41	68.4%
[522]	26-Mar-2015	4,242,063	\$34.56	(0.2%)	(0.2%)	0.4%	0.1%	(0.3%)	(0.24)	81.1%
[523]	27-Mar-2015	3,463,433	\$34.10	(1.3%)	0.3%	(0.0%)	(0.0%)	(1.3%)	(1.13)	26.1%
[524]	30-Mar-2015	4,788,006	\$34.06	(0.1%)	1.2%	(0.4%)	0.3%	(0.4%)	(0.36)	72.3%
[525]	31-Mar-2015	6,882,939	\$34.55	1.4%	(0.9%)	(0.6%)	(1.3%)	2.7%	2.29	2.4%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[526]	1-Apr-2015	8,262,141	\$35.50	2.7%	(0.4%)	2.7%	2.1%	0.6%	0.47	64.0%
[527]	2-Apr-2015	3,660,458	\$35.43	(0.2%)	0.4%	1.1%	1.2%	(1.4%)	(1.16)	24.9%
[528]	6-Apr-2015	3,339,699	\$35.38	(0.1%)	0.7%	(0.7%)	(0.4%)	0.2%	0.20	84.4%
[529]	7-Apr-2015	2,367,259	\$35.41	0.1%	(0.2%)	(0.5%)	(0.7%)	0.8%	0.68	49.6%
[530]	8-Apr-2015	3,214,111	\$35.50	0.3%	0.3%	(0.5%)	(0.4%)	0.7%	0.57	56.8%
[531]	9-Apr-2015	2,593,883	\$35.87	1.0%	0.4%	(0.6%)	(0.4%)	1.5%	1.22	22.3%
[532]	10-Apr-2015	2,779,706	\$35.82	(0.1%)	0.5%	(0.5%)	(0.3%)	0.2%	0.13	89.6%
[533]	13-Apr-2015	1,819,545	\$35.58	(0.7%)	(0.4%)	0.1%	(0.3%)	(0.4%)	(0.35)	72.7%
[534]	14-Apr-2015	2,081,951	\$35.68	0.3%	0.2%	(0.1%)	(0.1%)	0.3%	0.28	77.7%
[535]	15-Apr-2015	4,197,279	\$36.19	1.4%	0.5%	0.2%	0.4%	1.0%	0.87	38.8%
[536]	16-Apr-2015	4,617,211	\$35.28	(2.5%)	(0.1%)	0.1%	(0.0%)	(2.5%)	(2.10)	3.8%
[537]	17-Apr-2015	3,851,620	\$34.68	(1.7%)	(1.1%)	(0.5%)	(1.2%)	(0.5%)	(0.41)	68.5%
[538]	20-Apr-2015	2,640,006	\$35.22	1.6%	0.9%	0.7%	1.1%	0.5%	0.38	70.4%
[539]	21-Apr-2015	5,934,759	\$36.30	3.1%	(0.1%)	0.4%	0.2%	2.9%	2.37	1.9%
[540]	22-Apr-2015	3,602,493	\$36.27	(0.1%)	0.5%	(0.2%)	0.0%	(0.1%)	(0.10)	91.9%
[541]	23-Apr-2015	3,093,413	\$36.66	1.1%	0.2%	0.6%	0.7%	0.4%	0.32	74.9%
[542]	24-Apr-2015	2,542,099	\$36.41	(0.7%)	0.2%	(0.6%)	(0.6%)	(0.0%)	(0.04)	96.8%
[543]	27-Apr-2015	3,908,251	\$36.29	(0.3%)	(0.4%)	(0.6%)	(1.0%)	0.7%	0.54	59.2%
[544]	28-Apr-2015	3,517,736	\$36.78	1.4%	0.3%	1.1%	1.2%	0.1%	0.10	92.3%
[545]	29-Apr-2015	2,965,257	\$36.31	(1.3%)	(0.4%)	(0.4%)	(0.7%)	(0.6%)	(0.49)	62.8%
[546]	30-Apr-2015	4,176,729	\$35.96	(1.0%)	(1.0%)	(1.4%)	(2.2%)	1.2%	0.97	33.3%
[547]	1-May-2015	2,471,710	\$36.14	0.5%	1.1%	(0.9%)	(0.4%)	0.9%	0.70	48.3%
[548]	4-May-2015	2,613,384	\$36.02	(0.3%)	0.3%	(0.4%)	(0.2%)	(0.1%)	(0.08)	93.3%
[549]	5-May-2015	3,976,129	\$35.51	(1.4%)	(1.2%)	(0.4%)	(1.1%)	(0.3%)	(0.27)	78.8%
[550]	6-May-2015	9,386,969	\$34.53	(2.8%)	(0.4%)	(0.9%)	(1.1%)	(1.7%)	(1.46)	14.6%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[551]	7-May-2015	3,863,268	\$34.65	0.3%	0.4%	(0.9%)	(0.6%)	1.0%	0.85	39.4%
[552]	8-May-2015	3,481,238	\$34.95	0.9%	1.3%	(0.7%)	0.2%	0.7%	0.59	55.8%
[553]	11-May-2015	4,344,684	\$34.40	(1.6%)	(0.5%)	0.7%	0.2%	(1.7%)	(1.52)	13.1%
[554]	12-May-2015	4,783,766	\$35.00	1.7%	(0.3%)	0.7%	0.2%	1.5%	1.32	18.8%
[555]	13-May-2015	5,368,066	\$34.35	(1.9%)	(0.0%)	(0.3%)	(0.4%)	(1.4%)	(1.26)	21.2%
[556]	14-May-2015	2,715,694	\$34.34	(0.0%)	1.1%	(0.5%)	0.1%	(0.2%)	(0.13)	89.6%
[557]	15-May-2015	2,711,912	\$34.50	0.5%	0.1%	0.6%	0.5%	(0.0%)	(0.01)	99.6%
[558]	18-May-2015	2,817,213	\$34.40	(0.3%)	0.3%	0.2%	0.2%	(0.5%)	(0.46)	64.7%
[559]	19-May-2015	5,358,563	\$33.96	(1.3%)	(0.0%)	(1.5%)	(1.5%)	0.2%	0.19	84.9%
[560]	20-May-2015	4,611,412	\$34.36	1.2%	(0.1%)	0.3%	0.1%	1.1%	0.94	34.9%
[561]	21-May-2015	4,288,353	\$34.25	(0.3%)	0.2%	0.2%	0.2%	(0.5%)	(0.48)	63.5%
[562]	22-May-2015	4,925,861	\$33.95	(0.9%)	(0.2%)	(0.4%)	(0.7%)	(0.2%)	(0.20)	84.6%
[563]	26-May-2015	4,141,901	\$33.60	(1.0%)	(1.0%)	0.9%	(0.1%)	(1.0%)	(0.84)	40.0%
[564]	27-May-2015	3,260,169	\$33.94	1.0%	0.9%	0.4%	0.8%	0.2%	0.19	85.1%
[565]	28-May-2015	3,972,262	\$34.06	0.4%	(0.1%)	(0.3%)	(0.5%)	0.9%	0.79	43.3%
[566]	29-May-2015	5,441,963	\$33.24	(0.8%)	(0.6%)	0.7%	0.0%	(0.9%)	(0.77)	44.4%
[567]	1-Jun-2015	4,816,788	\$32.87	(1.1%)	0.2%	(1.5%)	(1.3%)	0.2%	0.15	88.5%
[568]	2-Jun-2015	4,601,140	\$32.96	0.3%	(0.1%)	1.3%	0.9%	(0.6%)	(0.56)	57.6%
[569]	3-Jun-2015	4,347,221	\$32.99	0.1%	0.2%	0.7%	0.6%	(0.5%)	(0.44)	65.9%
[570]	4-Jun-2015	4,776,906	\$32.83	(0.5%)	(0.9%)	(0.1%)	(0.8%)	0.3%	0.30	76.2%
[571]	5-Jun-2015	3,876,891	\$32.18	(2.0%)	(0.1%)	(0.0%)	(0.3%)	(1.7%)	(1.54)	12.7%
[572]	8-Jun-2015	3,782,990	\$32.22	0.1%	(0.6%)	0.4%	(0.2%)	0.3%	0.29	77.4%
[573]	9-Jun-2015	3,086,660	\$32.07	(0.5%)	0.0%	(0.5%)	(0.5%)	0.0%	0.03	97.3%
[574]	10-Jun-2015	3,191,806	\$32.26	0.6%	1.2%	0.2%	0.8%	(0.2%)	(0.17)	86.6%
[575]	11-Jun-2015	3,713,250	\$32.73	1.5%	0.2%	0.1%	0.1%	1.4%	1.23	22.2%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[576]	12-Jun-2015	3,084,436	\$32.56	(0.5%)	(0.7%)	0.4%	(0.3%)	(0.3%)	(0.23)	81.5%
[577]	15-Jun-2015	2,984,948	\$32.37	(0.6%)	(0.5%)	(0.3%)	(0.6%)	0.1%	0.05	96.3%
[578]	16-Jun-2015	3,404,984	\$32.22	(0.5%)	0.6%	(0.1%)	0.1%	(0.6%)	(0.50)	61.9%
[579]	17-Jun-2015	3,219,182	\$32.21	(0.0%)	0.2%	(0.2%)	(0.2%)	0.2%	0.19	84.8%
[580]	18-Jun-2015	3,734,092	\$32.36	0.5%	1.0%	0.2%	0.6%	(0.1%)	(0.08)	93.8%
[581]	19-Jun-2015	4,133,694	\$32.46	0.3%	(0.5%)	0.2%	(0.3%)	0.6%	0.53	60.1%
[582]	22-Jun-2015	3,486,763	\$32.65	0.6%	0.6%	0.2%	0.3%	0.3%	0.23	81.5%
[583]	23-Jun-2015	5,070,518	\$32.55	(0.3%)	0.1%	0.6%	0.3%	(0.6%)	(0.57)	57.0%
[584]	24-Jun-2015	11,369,663	\$31.88	(2.1%)	(0.7%)	(0.3%)	(0.8%)	(1.3%)	(1.11)	26.8%
[585]	25-Jun-2015	16,783,618	\$29.92	(6.1%)	(0.3%)	0.4%	(0.0%)	(6.1%)	(5.41)	0.0%
[586]	26-Jun-2015	15,536,278	\$29.99	0.2%	(0.0%)	(1.0%)	(1.0%)	1.2%	0.97	33.2%
[587]	29-Jun-2015	6,761,620	\$29.53	(1.5%)	(2.1%)	(0.2%)	(1.6%)	0.0%	0.02	98.2%
[588]	30-Jun-2015	5,479,010	\$29.38	(0.5%)	0.3%	(0.0%)	(0.1%)	(0.4%)	(0.34)	73.5%
[589]	1-Jul-2015	4,763,077	\$29.57	0.6%	0.7%	(0.4%)	(0.1%)	0.7%	0.57	56.6%
[590]	2-Jul-2015	3,657,952	\$29.61	0.1%	(0.0%)	(0.6%)	(0.7%)	0.8%	0.63	53.0%
[591]	6-Jul-2015	4,921,684	\$29.45	(0.5%)	(0.4%)	(0.6%)	(0.9%)	0.3%	0.25	80.6%
[592]	7-Jul-2015	4,530,105	\$29.88	1.5%	0.6%	(0.9%)	(0.5%)	2.0%	1.54	12.5%
[593]	8-Jul-2015	6,600,843	\$29.49	(1.3%)	(1.6%)	(0.2%)	(1.3%)	(0.0%)	(0.01)	99.3%
[594]	9-Jul-2015	4,324,932	\$29.49	-	0.2%	(0.4%)	(0.3%)	0.3%	0.23	81.5%
[595]	10-Jul-2015	3,685,707	\$29.76	0.9%	1.2%	0.4%	0.8%	0.1%	0.06	95.0%
[596]	13-Jul-2015	3,926,853	\$30.00	0.8%	1.1%	(0.3%)	0.3%	0.5%	0.38	70.7%
[597]	14-Jul-2015	4,625,674	\$29.98	(0.1%)	0.4%	0.3%	0.3%	(0.4%)	(0.29)	76.9%
[598]	15-Jul-2015	5,574,729	\$29.67	(1.0%)	(0.1%)	(0.6%)	(0.6%)	(0.4%)	(0.32)	74.9%
[599]	16-Jul-2015	5,894,343	\$30.49	2.8%	0.8%	0.4%	0.5%	2.2%	1.76	8.1%
[600]	17-Jul-2015	9,012,500	\$30.94	1.5%	0.1%	(0.6%)	(0.6%)	2.1%	1.60	11.3%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[601]	20-Jul-2015	5,489,999	\$30.50	(1.4%)	0.1%	(0.3%)	(0.4%)	(1.1%)	(0.81)	41.7%
[602]	21-Jul-2015	4,644,316	\$29.72	(2.6%)	(0.4%)	(0.4%)	(0.8%)	(1.8%)	(1.36)	17.6%
[603]	22-Jul-2015	4,721,124	\$29.19	(1.8%)	(0.2%)	(0.4%)	(0.7%)	(1.1%)	(0.86)	39.1%
[604]	23-Jul-2015	5,870,222	\$28.96	(0.8%)	(0.6%)	0.5%	(0.3%)	(0.5%)	(0.38)	70.5%
[605]	24-Jul-2015	6,520,639	\$28.03	(3.2%)	(1.1%)	(0.8%)	(1.5%)	(1.7%)	(1.26)	21.1%
[606]	27-Jul-2015	5,833,184	\$28.12	0.3%	(0.6%)	(0.2%)	(0.8%)	1.1%	0.86	39.4%
[607]	28-Jul-2015	4,480,178	\$28.22	0.4%	1.2%	(0.9%)	(0.0%)	0.4%	0.31	76.0%
[608]	29-Jul-2015	6,479,041	\$28.16	(0.2%)	0.7%	0.4%	0.5%	(0.7%)	(0.53)	59.9%
[609]	30-Jul-2015	5,565,390	\$28.16	-	0.0%	1.7%	0.9%	(0.9%)	(0.71)	47.7%
[610]	31-Jul-2015	6,924,981	\$28.60	1.6%	(0.2%)	1.9%	0.8%	0.8%	0.58	56.1%
[611]	3-Aug-2015	6,371,921	\$28.90	1.0%	(0.3%)	0.7%	0.0%	1.0%	0.85	39.6%
[612]	4-Aug-2015	5,086,260	\$28.43	(1.6%)	(0.2%)	(0.1%)	(0.5%)	(1.1%)	(0.93)	35.5%
[613]	5-Aug-2015	5,688,886	\$28.56	0.5%	0.3%	(0.3%)	(0.2%)	0.7%	0.56	57.4%
[614]	6-Aug-2015	13,508,550	\$27.93	(2.2%)	(0.7%)	0.5%	(0.5%)	(1.7%)	(1.43)	15.5%
[615]	7-Aug-2015	7,704,879	\$27.65	(1.0%)	(0.3%)	(0.7%)	(0.9%)	(0.1%)	(0.08)	93.6%
[616]	10-Aug-2015	5,873,043	\$28.76	4.0%	1.3%	1.3%	1.5%	2.5%	2.03	4.5%
[617]	11-Aug-2015	4,552,756	\$28.24	(1.8%)	(0.9%)	1.4%	(0.1%)	(1.7%)	(1.44)	15.2%
[618]	12-Aug-2015	5,320,177	\$28.53	1.0%	0.1%	(0.6%)	(0.5%)	1.5%	1.29	20.1%
[619]	13-Aug-2015	5,846,258	\$27.97	(2.0%)	(0.1%)	0.2%	(0.1%)	(1.8%)	(1.56)	12.1%
[620]	14-Aug-2015	3,816,293	\$28.27	1.1%	0.4%	1.1%	0.8%	0.2%	0.21	83.6%
[621]	17-Aug-2015	3,293,200	\$28.42	0.5%	0.5%	0.8%	0.8%	(0.3%)	(0.22)	82.3%
[622]	18-Aug-2015	4,753,409	\$28.12	(1.1%)	(0.2%)	(0.3%)	(0.6%)	(0.4%)	(0.38)	70.4%
[623]	19-Aug-2015	3,766,344	\$28.37	0.9%	(0.8%)	0.2%	(0.8%)	1.7%	1.46	14.6%
[624]	20-Aug-2015	3,760,743	\$27.71	(2.3%)	(2.1%)	(0.2%)	(2.2%)	(0.2%)	(0.13)	89.7%
[625]	21-Aug-2015	5,755,065	\$27.11	(2.2%)	(3.2%)	2.3%	(1.6%)	(0.5%)	(0.42)	67.9%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[626]	24-Aug-2015	10,127,938	\$25.86	(4.6%)	(3.9%)	(0.6%)	(3.9%)	(0.7%)	(0.57)	57.2%
[627]	25-Aug-2015	7,079,980	\$25.17	(2.7%)	(1.4%)	(0.4%)	(1.6%)	(1.1%)	(0.91)	36.4%
[628]	26-Aug-2015	8,906,206	\$26.37	4.8%	3.9%	(0.9%)	2.8%	1.9%	1.51	13.3%
[629]	27-Aug-2015	7,642,378	\$26.74	1.4%	2.4%	(0.3%)	2.0%	(0.6%)	(0.50)	61.5%
[630]	28-Aug-2015	4,785,218	\$27.04	1.1%	0.1%	0.5%	0.2%	0.9%	0.80	42.4%
[631]	31-Aug-2015	5,508,933	\$27.04	-	(0.8%)	0.3%	(0.8%)	0.8%	0.71	48.1%
[632]	1-Sep-2015	6,195,489	\$25.90	(4.2%)	(3.0%)	0.2%	(2.9%)	(1.3%)	(1.07)	28.9%
[633]	2-Sep-2015	10,175,406	\$27.00	4.2%	1.8%	0.5%	2.0%	2.3%	1.92	5.7%
[634]	3-Sep-2015	5,027,407	\$26.77	1.1%	0.1%	0.5%	0.3%	0.9%	0.75	45.4%
[635]	4-Sep-2015	5,944,914	\$26.18	(2.2%)	(1.5%)	0.3%	(1.6%)	(0.7%)	(0.55)	58.4%
[636]	8-Sep-2015	9,591,788	\$26.96	3.0%	2.5%	(0.7%)	2.1%	0.8%	0.70	48.8%
[637]	9-Sep-2015	5,811,184	\$26.97	0.0%	(1.4%)	0.2%	(1.5%)	1.5%	1.32	18.8%
[638]	10-Sep-2015	7,831,290	\$26.78	(0.7%)	0.5%	(0.9%)	(0.1%)	(0.6%)	(0.52)	60.6%
[639]	11-Sep-2015	6,059,335	\$26.28	(1.9%)	0.5%	(0.3%)	0.2%	(2.0%)	(1.75)	8.2%
[640]	14-Sep-2015	3,701,220	\$26.07	(0.8%)	(0.4%)	0.0%	(0.6%)	(0.2%)	(0.21)	83.6%
[641]	15-Sep-2015	5,446,677	\$26.47	1.5%	1.3%	0.4%	1.4%	0.1%	0.09	92.6%
[642]	16-Sep-2015	4,934,663	\$26.13	(1.3%)	0.9%	(0.1%)	0.7%	(2.0%)	(1.70)	9.1%
[643]	17-Sep-2015	5,639,564	\$26.04	(0.3%)	(0.2%)	0.5%	(0.1%)	(0.2%)	(0.21)	83.7%
[644]	18-Sep-2015	8,333,746	\$25.63	(1.6%)	(1.6%)	(0.1%)	(1.9%)	0.4%	0.30	76.4%
[645]	21-Sep-2015	4,148,755	\$25.88	1.0%	0.5%	0.0%	0.3%	0.6%	0.54	59.2%
[646]	22-Sep-2015	5,241,863	\$25.38	(1.9%)	(1.2%)	(0.2%)	(1.6%)	(0.3%)	(0.28)	77.8%
[647]	23-Sep-2015	4,049,395	\$25.15	(0.9%)	(0.2%)	(0.2%)	(0.5%)	(0.4%)	(0.35)	72.8%
[648]	24-Sep-2015	6,792,079	\$25.02	(0.5%)	(0.3%)	0.3%	(0.4%)	(0.1%)	(0.10)	91.8%
[649]	25-Sep-2015	5,740,636	\$25.36	1.4%	(0.0%)	(0.8%)	(0.7%)	2.1%	1.83	7.0%
[650]	28-Sep-2015	6,898,404	\$24.61	(3.0%)	(2.5%)	(1.2%)	(3.7%)	0.7%	0.61	54.0%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[651]	29-Sep-2015	5,279,938	\$24.69	0.3%	0.1%	(1.4%)	(0.9%)	1.2%	1.01	31.4%
[652]	30-Sep-2015	5,522,854	\$25.12	1.7%	1.9%	0.2%	2.0%	(0.3%)	(0.23)	81.5%
[653]	1-Oct-2015	4,458,221	\$24.60	(2.1%)	0.2%	(1.4%)	(0.8%)	(1.3%)	(1.12)	26.7%
[654]	2-Oct-2015	4,971,312	\$24.65	0.2%	1.4%	0.0%	1.4%	(1.2%)	(1.03)	30.7%
[655]	5-Oct-2015	4,026,633	\$25.64	4.0%	1.8%	1.9%	2.9%	1.1%	0.94	34.9%
[656]	6-Oct-2015	5,358,222	\$25.62	(0.1%)	(0.4%)	0.2%	(0.5%)	0.4%	0.35	72.7%
[657]	7-Oct-2015	3,938,851	\$26.06	1.7%	0.8%	0.9%	1.3%	0.4%	0.34	73.5%
[658]	8-Oct-2015	3,675,315	\$26.51	1.7%	0.9%	0.0%	0.8%	0.9%	0.78	43.5%
[659]	9-Oct-2015	5,020,656	\$25.72	(3.0%)	0.1%	(0.7%)	(0.5%)	(2.5%)	(2.16)	3.3%
[660]	12-Oct-2015	3,541,776	\$25.86	0.5%	0.1%	0.4%	0.1%	0.4%	0.35	72.7%
[661]	13-Oct-2015	3,339,504	\$25.78	(0.3%)	(0.7%)	(0.1%)	(1.0%)	0.7%	0.65	51.7%
[662]	14-Oct-2015	3,472,320	\$26.18	1.6%	(0.5%)	(0.2%)	(0.9%)	2.4%	2.15	3.4%
[663]	15-Oct-2015	4,160,844	\$26.98	3.1%	1.5%	1.3%	2.3%	0.8%	0.68	49.8%
[664]	16-Oct-2015	4,096,342	\$26.81	(0.6%)	0.5%	(0.3%)	0.2%	(0.8%)	(0.68)	49.7%
[665]	19-Oct-2015	4,432,493	\$26.92	0.4%	0.0%	0.1%	(0.1%)	0.5%	0.42	67.2%
[666]	20-Oct-2015	2,694,768	\$27.25	1.2%	(0.1%)	1.9%	0.8%	0.4%	0.32	74.9%
[667]	21-Oct-2015	3,069,854	\$27.20	(0.2%)	(0.6%)	(0.6%)	(1.2%)	1.0%	0.91	36.6%
[668]	22-Oct-2015	4,140,675	\$27.91	2.6%	1.7%	0.7%	2.1%	0.5%	0.40	68.8%
[669]	23-Oct-2015	3,547,696	\$28.02	0.4%	1.1%	0.2%	1.2%	(0.8%)	(0.69)	49.2%
[670]	26-Oct-2015	4,220,261	\$28.32	1.1%	(0.2%)	(0.2%)	(0.5%)	1.6%	1.35	18.1%
[671]	27-Oct-2015	3,632,853	\$27.64	(2.4%)	(0.3%)	(1.4%)	(1.3%)	(1.1%)	(0.94)	34.7%
[672]	28-Oct-2015	3,089,091	\$28.12	1.7%	1.2%	1.6%	2.3%	(0.5%)	(0.45)	65.4%
[673]	29-Oct-2015	3,035,016	\$28.08	(0.1%)	(0.0%)	(1.3%)	(1.0%)	0.9%	0.75	45.7%
[674]	30-Oct-2015	3,720,764	\$28.21	0.5%	(0.5%)	1.0%	(0.0%)	0.5%	0.40	69.1%
[675]	2-Nov-2015	4,808,394	\$28.41	0.7%	1.2%	0.8%	1.7%	(1.0%)	(0.87)	38.5%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[676]	3-Nov-2015	4,474,698	\$28.49	0.3%	0.3%	(0.8%)	(0.3%)	0.6%	0.52	60.6%
[677]	4-Nov-2015	6,207,471	\$28.02	(1.6%)	(0.3%)	(0.2%)	(0.6%)	(1.1%)	(0.93)	35.6%
[678]	5-Nov-2015	7,444,523	\$28.71	2.5%	(0.1%)	(0.7%)	(0.7%)	3.1%	2.73	0.7%
[679]	6-Nov-2015	5,289,408	\$28.57	(0.5%)	(0.0%)	0.1%	(0.1%)	(0.4%)	(0.36)	72.3%
[680]	9-Nov-2015	4,413,995	\$28.81	0.8%	(1.0%)	(0.0%)	(1.2%)	2.1%	1.74	8.4%
[681]	10-Nov-2015	3,269,265	\$28.60	(0.7%)	0.2%	(0.9%)	(0.4%)	(0.3%)	(0.26)	79.2%
[682]	11-Nov-2015	3,853,388	\$28.43	(0.6%)	(0.3%)	(0.3%)	(0.7%)	0.1%	0.06	95.5%
[683]	12-Nov-2015	3,658,788	\$28.00	(1.5%)	(1.4%)	0.6%	(1.3%)	(0.2%)	(0.20)	84.5%
[684]	13-Nov-2015	4,480,416	\$27.70	(1.1%)	(1.1%)	(0.0%)	(1.4%)	0.3%	0.25	80.3%
[685]	16-Nov-2015	3,367,070	\$28.48	2.8%	1.5%	(0.1%)	1.6%	1.3%	1.06	29.2%
[686]	17-Nov-2015	4,105,958	\$28.13	(1.2%)	(0.1%)	0.5%	0.1%	(1.3%)	(1.09)	27.7%
[687]	18-Nov-2015	3,789,396	\$28.49	1.3%	1.6%	(0.1%)	1.7%	(0.4%)	(0.35)	72.9%
[688]	19-Nov-2015	3,828,402	\$28.47	(0.1%)	(0.1%)	0.1%	(0.2%)	0.1%	0.08	93.3%
[689]	20-Nov-2015	5,796,100	\$27.23	(2.5%)	0.4%	(0.6%)	0.0%	(2.5%)	(2.08)	4.0%
[690]	23-Nov-2015	4,148,986	\$27.31	0.3%	(0.1%)	(0.0%)	(0.3%)	0.6%	0.47	64.0%
[691]	24-Nov-2015	3,570,348	\$27.23	(0.3%)	0.1%	0.2%	0.1%	(0.4%)	(0.35)	72.4%
[692]	25-Nov-2015	2,970,836	\$26.98	(0.9%)	(0.0%)	(0.2%)	(0.2%)	(0.7%)	(0.58)	56.3%
[693]	27-Nov-2015	1,631,430	\$27.06	0.3%	0.1%	0.4%	0.2%	0.1%	0.07	94.8%
[694]	30-Nov-2015	4,595,274	\$26.93	(0.5%)	(0.5%)	0.0%	(0.6%)	0.1%	0.12	90.3%
[695]	1-Dec-2015	5,543,083	\$27.03	0.4%	1.1%	(0.2%)	1.0%	(0.6%)	(0.49)	62.7%
[696]	2-Dec-2015	4,266,607	\$26.47	(2.1%)	(1.1%)	0.1%	(1.3%)	(0.8%)	(0.66)	51.0%
[697]	3-Dec-2015	6,509,011	\$26.46	(0.0%)	(1.4%)	(0.0%)	(1.8%)	1.7%	1.43	15.6%
[698]	4-Dec-2015	5,513,408	\$26.71	0.9%	2.1%	(1.0%)	1.6%	(0.6%)	(0.52)	60.6%
[699]	7-Dec-2015	5,394,426	\$27.13	1.6%	(0.7%)	0.1%	(0.8%)	2.4%	1.98	5.0%
[700]	8-Dec-2015	6,476,982	\$26.54	(2.2%)	(0.6%)	1.0%	(0.2%)	(2.0%)	(1.60)	11.3%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	t-Statistic	p-Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[701]	9-Dec-2015	5,283,927	\$26.38	(0.6%)	(0.8%)	(1.0%)	(1.5%)	0.9%	0.75	45.4%
[702]	10-Dec-2015	5,108,870	\$25.99	(1.5%)	0.2%	(0.4%)	(0.1%)	(1.4%)	(1.11)	27.0%
[703]	11-Dec-2015	5,951,692	\$24.91	(4.2%)	(1.9%)	(1.3%)	(3.0%)	(1.2%)	(0.93)	35.5%
[704]	14-Dec-2015	6,389,968	\$24.38	(2.1%)	0.5%	(0.7%)	(0.0%)	(2.1%)	(1.68)	9.6%
[705]	15-Dec-2015	7,013,139	\$25.34	3.9%	1.1%	(0.0%)	1.0%	2.9%	2.32	2.2%
[706]	16-Dec-2015	6,804,045	\$26.12	3.1%	1.5%	1.3%	2.4%	0.7%	0.59	55.9%
[707]	17-Dec-2015	4,374,411	\$25.40	(2.8%)	(1.5%)	0.2%	(1.6%)	(1.2%)	(0.99)	32.4%
[708]	18-Dec-2015	8,752,339	\$25.11	(1.1%)	(1.8%)	0.4%	(1.8%)	0.7%	0.60	55.2%
[709]	21-Dec-2015	5,599,663	\$25.16	0.2%	0.8%	0.2%	1.0%	(0.8%)	(0.68)	49.7%
[710]	22-Dec-2015	5,261,592	\$25.18	0.1%	0.9%	0.5%	1.3%	(1.2%)	(1.01)	31.3%
[711]	23-Dec-2015	4,069,073	\$26.02	3.3%	1.2%	1.0%	2.0%	1.3%	1.12	26.6%
[712]	24-Dec-2015	1,582,890	\$25.87	(0.6%)	(0.2%)	(0.2%)	(0.4%)	(0.2%)	(0.16)	87.1%
[713]	28-Dec-2015	3,228,909	\$25.84	(0.1%)	(0.2%)	(0.0%)	(0.3%)	0.2%	0.19	84.6%
[714]	29-Dec-2015	3,457,660	\$25.88	0.2%	1.1%	(0.1%)	1.1%	(1.0%)	(0.83)	40.7%
[715]	30-Dec-2015	2,772,415	\$25.38	(1.9%)	(0.7%)	(0.8%)	(1.5%)	(0.4%)	(0.36)	71.8%
[716]	31-Dec-2015	3,276,651	\$25.16	(0.9%)	(0.9%)	(0.1%)	(1.3%)	0.4%	0.34	73.6%
[717]	4-Jan-2016	4,938,951	\$25.11	(0.2%)	(1.5%)	(1.2%)	(2.7%)	2.5%	2.13	3.5%
[718]	5-Jan-2016	4,283,455	\$24.99	(0.5%)	0.2%	0.8%	0.7%	(1.2%)	(1.01)	31.5%
[719]	6-Jan-2016	4,083,396	\$24.72	(1.1%)	(1.3%)	0.4%	(1.3%)	0.2%	0.16	87.2%
[720]	7-Jan-2016	4,902,768	\$24.22	(2.0%)	(2.4%)	(0.6%)	(3.1%)	1.1%	0.93	35.5%
[721]	8-Jan-2016	4,337,629	\$23.97	(1.0%)	(1.1%)	0.2%	(1.2%)	0.2%	0.13	89.8%
[722]	11-Jan-2016	4,971,370	\$24.12	0.6%	0.1%	0.1%	0.1%	0.5%	0.46	64.4%
[723]	12-Jan-2016	6,017,563	\$23.40	(3.0%)	0.8%	(1.4%)	(0.1%)	(2.8%)	(2.42)	1.7%
[724]	13-Jan-2016	6,916,639	\$23.02	(1.6%)	(2.5%)	(0.5%)	(3.2%)	1.5%	1.29	20.1%
[725]	14-Jan-2016	7,178,695	\$23.89	3.8%	1.7%	0.3%	1.9%	1.9%	1.54	12.5%

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				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	t-Statistic	p-Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[726]	15-Jan-2016	6,894,063	\$23.29	(2.5%)	(2.2%)	(1.1%)	(3.1%)	0.6%	0.51	60.8%
[727]	19-Jan-2016	4,501,110	\$23.22	(0.3%)	0.1%	(0.1%)	(0.1%)	(0.2%)	(0.18)	85.6%
[728]	20-Jan-2016	8,295,865	\$22.24	(4.2%)	(1.2%)	(0.9%)	(2.0%)	(2.3%)	(1.89)	6.1%
[729]	21-Jan-2016	10,569,765	\$22.62	1.7%	0.5%	(0.2%)	0.4%	1.3%	1.07	28.7%
[730]	22-Jan-2016	6,316,063	\$23.80	5.2%	2.0%	2.6%	4.2%	1.0%	0.79	43.3%
[731]	25-Jan-2016	7,626,686	\$23.76	(0.2%)	(1.6%)	0.9%	(1.1%)	1.0%	0.80	42.6%
[732]	26-Jan-2016	5,288,742	\$24.56	3.4%	1.4%	1.3%	2.6%	0.7%	0.60	54.8%
[733]	27-Jan-2016	6,426,987	\$24.63	0.3%	(1.1%)	0.6%	(0.8%)	1.1%	0.90	37.2%
[734]	28-Jan-2016	4,887,040	\$24.82	0.8%	0.6%	(0.8%)	(0.0%)	0.8%	0.65	51.6%
[735]	29-Jan-2016	4,860,059	\$25.42	2.4%	2.5%	0.3%	3.1%	(0.7%)	(0.54)	59.0%
[736]	1-Feb-2016	4,773,288	\$25.90	1.9%	(0.0%)	0.1%	0.1%	1.8%	1.53	13.0%
[737]	2-Feb-2016	4,314,759	\$25.21	(2.7%)	(1.9%)	(0.3%)	(2.3%)	(0.3%)	(0.26)	79.3%
[738]	3-Feb-2016	4,881,086	\$26.08	3.5%	0.5%	0.5%	1.1%	2.4%	2.01	4.7%
[739]	4-Feb-2016	5,722,189	\$26.54	1.8%	0.2%	0.7%	0.8%	0.9%	0.76	44.7%
[740]	5-Feb-2016	8,633,755	\$26.61	0.3%	(1.8%)	(0.4%)	(2.4%)	2.7%	2.21	2.9%
[741]	8-Feb-2016	9,290,128	\$25.63	(3.7%)	(1.4%)	(1.9%)	(3.1%)	(0.6%)	(0.48)	63.3%
[742]	9-Feb-2016	10,292,095	\$24.81	(3.2%)	(0.0%)	(1.0%)	(0.9%)	(2.3%)	(1.89)	6.1%
[743]	10-Feb-2016	7,047,261	\$24.59	(0.9%)	0.0%	0.5%	0.5%	(1.4%)	(1.13)	26.2%
[744]	11-Feb-2016	15,041,048	\$27.29	11.0%	(1.2%)	1.8%	0.3%	10.7%	8.44	0.0%
[745]	12-Feb-2016	10,674,957	\$28.61	4.8%	2.0%	(0.5%)	1.6%	3.3%	2.07	4.0%
[746]	16-Feb-2016	5,918,759	\$28.92	1.1%	1.7%	(0.3%)	1.6%	(0.5%)	(0.34)	73.2%
[747]	17-Feb-2016	7,100,608	\$29.73	2.8%	1.7%	0.2%	2.2%	0.6%	0.36	72.1%
[748]	18-Feb-2016	8,243,833	\$30.32	2.0%	(0.5%)	0.5%	0.2%	1.7%	1.10	27.4%
[749]	19-Feb-2016	6,510,894	\$29.73	(1.9%)	0.0%	(1.0%)	(1.1%)	(0.8%)	(0.53)	59.8%
[750]	22-Feb-2016	5,476,039	\$29.99	0.9%	1.4%	0.2%	2.0%	(1.1%)	(0.70)	48.7%

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ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[751]	23-Feb-2016	6,814,060	\$29.25	(2.5%)	(1.2%)	1.9%	1.3%	(3.7%)	(2.29)	2.4%
[752]	24-Feb-2016	7,120,802	\$30.01	2.6%	0.4%	1.4%	2.3%	0.3%	0.17	86.2%
[753]	25-Feb-2016	4,701,352	\$30.41	1.3%	1.2%	(0.5%)	0.8%	0.6%	0.36	71.9%
[754]	26-Feb-2016	4,829,897	\$30.17	(0.8%)	(0.2%)	1.1%	1.3%	(2.1%)	(1.31)	19.2%
[755]	29-Feb-2016	6,387,755	\$30.59	1.4%	(0.8%)	2.3%	2.0%	(0.6%)	(0.34)	73.3%
[756]	1-Mar-2016	6,917,669	\$31.12	1.7%	2.4%	(1.6%)	0.8%	1.0%	0.59	55.5%
[757]	2-Mar-2016	6,450,364	\$31.15	1.8%	0.4%	1.0%	1.8%	0.0%	0.02	98.1%
[758]	3-Mar-2016	5,372,360	\$31.37	0.7%	0.4%	(0.6%)	(0.1%)	0.8%	0.53	59.5%
[759]	4-Mar-2016	6,292,744	\$31.59	0.7%	0.3%	(0.8%)	(0.4%)	1.1%	0.67	50.3%
[760]	7-Mar-2016	5,096,593	\$31.77	0.6%	0.1%	0.5%	0.9%	(0.3%)	(0.19)	85.0%
[761]	8-Mar-2016	5,550,512	\$31.51	(0.8%)	(1.1%)	0.4%	(0.5%)	(0.3%)	(0.17)	86.4%
[762]	9-Mar-2016	4,207,328	\$31.53	0.1%	0.5%	(1.4%)	(0.9%)	0.9%	0.57	56.7%
[763]	10-Mar-2016	6,562,117	\$31.71	0.6%	0.0%	(0.5%)	(0.4%)	0.9%	0.59	55.4%
[764]	11-Mar-2016	4,128,254	\$31.87	0.5%	1.7%	(0.6%)	1.3%	(0.8%)	(0.49)	62.8%
[765]	14-Mar-2016	3,527,400	\$31.95	0.3%	(0.1%)	0.1%	0.2%	0.1%	0.06	95.4%
[766]	15-Mar-2016	5,593,898	\$31.32	(2.0%)	(0.2%)	(1.4%)	(1.6%)	(0.4%)	(0.25)	80.0%
[767]	16-Mar-2016	5,314,404	\$32.17	2.7%	0.6%	0.2%	1.0%	1.7%	1.10	27.5%
[768]	17-Mar-2016	7,928,385	\$31.30	(2.7%)	0.7%	0.2%	1.2%	(3.9%)	(2.44)	1.6%
[769]	18-Mar-2016	7,913,671	\$31.70	1.3%	0.4%	(0.3%)	0.3%	1.0%	0.61	54.0%
[770]	21-Mar-2016	3,569,607	\$31.70	-	0.1%	(0.6%)	(0.4%)	0.4%	0.22	82.5%
[771]	22-Mar-2016	4,077,925	\$31.62	(0.3%)	(0.1%)	0.0%	0.1%	(0.4%)	(0.24)	81.2%
[772]	23-Mar-2016	5,105,004	\$31.02	(1.9%)	(0.6%)	(0.5%)	(1.1%)	(0.8%)	(0.50)	62.1%
[773]	24-Mar-2016	5,416,762	\$31.16	0.5%	(0.0%)	0.8%	1.0%	(0.6%)	(0.35)	72.5%
[774]	28-Mar-2016	3,158,558	\$31.08	(0.3%)	0.1%	0.1%	0.4%	(0.7%)	(0.41)	68.1%
[775]	29-Mar-2016	3,393,052	\$31.59	1.6%	0.9%	1.8%	3.1%	(1.5%)	(0.91)	36.4%

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ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	t-Statistic	p-Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[776]	30-Mar-2016	3,660,972	\$31.87	0.9%	0.4%	(0.0%)	0.6%	0.3%	0.16	87.4%
[777]	31-Mar-2016	6,807,671	\$31.96	0.3%	(0.2%)	0.1%	0.0%	0.3%	0.16	87.6%
[778]	1-Apr-2016	6,219,552	\$32.18	0.7%	0.6%	0.8%	1.7%	(1.0%)	(0.60)	55.2%
[779]	4-Apr-2016	5,186,826	\$32.23	0.2%	(0.3%)	0.9%	0.9%	(0.7%)	(0.46)	64.9%
[780]	5-Apr-2016	5,271,152	\$32.10	(0.4%)	(1.0%)	(0.4%)	(1.2%)	0.8%	0.50	62.0%
[781]	6-Apr-2016	3,832,591	\$32.49	1.2%	1.1%	(0.7%)	0.5%	0.7%	0.43	66.9%
[782]	7-Apr-2016	5,704,504	\$31.87	(1.9%)	(1.2%)	(0.1%)	(1.2%)	(0.8%)	(0.47)	63.8%
[783]	8-Apr-2016	3,873,271	\$31.88	0.0%	0.3%	(0.2%)	0.2%	(0.2%)	(0.13)	89.4%
[784]	11-Apr-2016	2,921,012	\$32.08	0.6%	(0.3%)	(0.4%)	(0.5%)	1.1%	0.70	48.3%
[785]	12-Apr-2016	3,529,556	\$32.00	(0.2%)	1.0%	(0.3%)	0.8%	(1.1%)	(0.68)	49.5%
[786]	13-Apr-2016	3,308,900	\$32.19	0.6%	1.0%	(0.7%)	0.5%	0.1%	0.06	94.9%
[787]	14-Apr-2016	3,383,582	\$32.09	(0.3%)	0.0%	0.2%	0.4%	(0.7%)	(0.45)	65.7%
[788]	15-Apr-2016	2,956,936	\$32.26	0.5%	(0.1%)	0.7%	0.8%	(0.3%)	(0.18)	85.4%
[789]	18-Apr-2016	2,990,263	\$32.22	(0.1%)	0.7%	(0.1%)	0.6%	(0.8%)	(0.48)	63.3%
[790]	19-Apr-2016	3,578,632	\$32.71	1.5%	0.3%	0.5%	1.0%	0.5%	0.32	74.6%
[791]	20-Apr-2016	3,966,598	\$32.80	0.3%	0.1%	0.0%	0.3%	0.0%	0.01	99.5%
[792]	21-Apr-2016	4,347,968	\$31.39	(4.3%)	(0.5%)	(1.0%)	(1.4%)	(2.9%)	(1.80)	7.4%
[793]	22-Apr-2016	4,160,155	\$31.39	-	0.0%	1.5%	1.8%	(1.8%)	(1.09)	27.7%
[794]	25-Apr-2016	3,717,891	\$31.18	(0.7%)	(0.2%)	(0.3%)	(0.3%)	(0.3%)	(0.20)	84.0%
[795]	26-Apr-2016	3,160,336	\$31.42	0.8%	0.2%	(0.1%)	0.2%	0.6%	0.38	70.3%
[796]	27-Apr-2016	4,423,518	\$31.58	0.5%	0.2%	0.6%	0.9%	(0.4%)	(0.27)	78.7%
[797]	28-Apr-2016	3,360,991	\$31.36	(0.7%)	(0.9%)	(0.0%)	(0.8%)	0.1%	0.09	93.2%
[798]	29-Apr-2016	5,360,069	\$30.95	(1.3%)	(0.5%)	(0.0%)	(0.4%)	(0.9%)	(0.57)	57.2%
[799]	2-May-2016	7,744,284	\$31.48	1.7%	0.8%	0.8%	1.9%	(0.1%)	(0.09)	92.6%
[800]	3-May-2016	7,598,217	\$30.58	(2.9%)	(0.9%)	(0.3%)	(1.1%)	(1.8%)	(1.12)	26.4%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	t-Statistic	p-Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[801]	4-May-2016	6,656,754	\$30.96	1.2%	(0.6%)	0.5%	0.1%	1.2%	0.75	45.7%
[802]	5-May-2016	20,521,476	\$28.20	(8.9%)	0.0%	(1.9%)	(2.1%)	(6.8%)	(4.21)	0.0%
[803]	6-May-2016	9,444,983	\$28.54	1.2%	0.3%	(0.6%)	(0.4%)	1.6%	0.97	33.4%
[804]	9-May-2016	6,057,075	\$28.21	(1.2%)	0.1%	(0.2%)	(0.2%)	(1.0%)	(0.59)	55.8%
[805]	10-May-2016	5,924,534	\$28.73	1.8%	1.3%	(0.0%)	1.3%	0.5%	0.30	76.6%
[806]	11-May-2016	3,903,644	\$28.31	(1.5%)	(0.9%)	0.5%	(0.2%)	(1.2%)	(0.72)	47.0%
[807]	12-May-2016	3,940,966	\$28.46	0.5%	(0.0%)	(0.7%)	(1.0%)	1.5%	0.88	38.1%
[808]	13-May-2016	4,112,858	\$27.88	(2.0%)	(0.8%)	0.8%	0.3%	(2.3%)	(1.37)	17.4%
[809]	16-May-2016	3,863,441	\$27.82	(0.2%)	1.0%	(0.1%)	0.9%	(1.1%)	(0.64)	52.0%
[810]	17-May-2016	5,193,072	\$27.45	(1.3%)	(0.9%)	(0.9%)	(2.0%)	0.7%	0.39	69.4%
[811]	18-May-2016	5,896,542	\$26.88	(2.1%)	0.0%	1.4%	1.8%	(3.9%)	(2.27)	2.5%
[812]	19-May-2016	6,537,034	\$26.92	0.1%	(0.4%)	(0.5%)	(1.0%)	1.1%	0.64	52.3%
[813]	20-May-2016	4,545,375	\$27.06	0.5%	0.6%	0.5%	1.3%	(0.7%)	(0.42)	67.5%
[814]	23-May-2016	3,988,278	\$26.91	(0.6%)	(0.2%)	(0.3%)	(0.5%)	(0.0%)	(0.03)	97.7%
[815]	24-May-2016	4,142,932	\$27.20	1.1%	1.4%	(0.3%)	1.1%	0.0%	0.01	99.0%
[816]	25-May-2016	3,996,238	\$27.18	(0.1%)	0.7%	(0.6%)	0.1%	(0.1%)	(0.09)	93.2%
[817]	26-May-2016	3,891,829	\$26.63	(0.0%)	(0.0%)	0.7%	0.9%	(0.9%)	(0.53)	59.4%
[818]	27-May-2016	3,173,307	\$26.81	0.7%	0.4%	0.1%	0.6%	0.1%	0.06	95.5%
[819]	31-May-2016	6,054,661	\$27.12	1.2%	(0.1%)	0.7%	0.8%	0.3%	0.19	85.3%
[820]	1-Jun-2016	4,001,728	\$26.90	(0.8%)	0.1%	(1.4%)	(1.5%)	0.7%	0.41	68.5%
[821]	2-Jun-2016	3,685,978	\$27.12	0.8%	0.3%	0.6%	1.1%	(0.3%)	(0.16)	86.9%
[822]	3-Jun-2016	4,518,663	\$27.35	0.8%	(0.3%)	(1.8%)	(2.5%)	3.4%	1.95	5.3%
[823]	6-Jun-2016	4,337,203	\$27.15	(0.7%)	0.5%	0.0%	0.6%	(1.3%)	(0.78)	43.9%
[824]	7-Jun-2016	5,174,476	\$27.29	0.5%	0.1%	1.3%	1.7%	(1.2%)	(0.70)	48.8%
[825]	8-Jun-2016	4,554,999	\$27.04	(0.9%)	0.4%	(0.0%)	0.4%	(1.4%)	(0.80)	42.8%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[826]	9-Jun-2016	3,235,638	\$27.00	(0.1%)	(0.2%)	(0.6%)	(0.8%)	0.6%	0.36	72.0%
[827]	10-Jun-2016	5,564,331	\$26.96	(0.1%)	(0.9%)	(0.1%)	(1.0%)	0.8%	0.49	62.2%
[828]	13-Jun-2016	5,699,862	\$26.89	(0.3%)	(0.8%)	0.5%	(0.1%)	(0.1%)	(0.08)	94.0%
[829]	14-Jun-2016	5,626,759	\$26.68	(0.8%)	(0.2%)	1.1%	1.2%	(2.0%)	(1.15)	25.4%
[830]	15-Jun-2016	9,091,734	\$27.23	2.1%	(0.2%)	0.3%	0.2%	1.8%	1.09	27.9%
[831]	16-Jun-2016	7,071,353	\$27.24	0.0%	0.3%	0.9%	1.4%	(1.3%)	(0.77)	44.3%
[832]	17-Jun-2016	10,587,099	\$27.46	0.8%	(0.3%)	0.2%	0.0%	0.8%	0.47	63.8%
[833]	20-Jun-2016	4,314,380	\$27.57	0.4%	0.6%	0.5%	1.2%	(0.8%)	(0.45)	65.1%
[834]	21-Jun-2016	4,730,413	\$28.08	1.8%	0.3%	0.5%	0.9%	1.0%	0.57	56.8%
[835]	22-Jun-2016	4,703,300	\$27.92	(0.6%)	(0.2%)	(0.2%)	(0.3%)	(0.3%)	(0.15)	88.4%
[836]	23-Jun-2016	3,478,131	\$28.52	2.1%	1.3%	0.7%	2.1%	0.0%	0.01	99.5%
[837]	24-Jun-2016	7,198,691	\$27.93	(2.1%)	(3.6%)	0.2%	(3.1%)	1.0%	0.58	56.4%
[838]	27-Jun-2016	7,803,316	\$26.82	(4.0%)	(1.8%)	(0.1%)	(1.7%)	(2.3%)	(1.34)	18.2%
[839]	28-Jun-2016	4,788,040	\$27.84	3.8%	1.8%	0.0%	1.9%	1.9%	1.08	28.1%
[840]	29-Jun-2016	7,539,651	\$28.45	2.2%	1.7%	0.7%	2.6%	(0.4%)	(0.24)	80.9%
[841]	30-Jun-2016	5,490,072	\$29.01	2.0%	1.4%	0.4%	2.0%	(0.0%)	(0.02)	98.5%
[842]	1-Jul-2016	4,016,696	\$29.37	1.2%	0.2%	(0.4%)	(0.1%)	1.3%	0.76	44.9%
[843]	5-Jul-2016	3,620,604	\$28.93	(1.5%)	(0.7%)	0.1%	(0.4%)	(1.1%)	(0.61)	54.0%
[844]	6-Jul-2016	4,360,032	\$29.50	2.0%	0.6%	(0.5%)	0.3%	1.7%	1.00	32.0%
[845]	7-Jul-2016	3,568,819	\$29.38	(0.4%)	(0.1%)	(0.2%)	(0.1%)	(0.3%)	(0.18)	85.9%
[846]	8-Jul-2016	5,100,813	\$30.22	2.9%	1.5%	0.5%	2.3%	0.5%	0.32	75.2%
[847]	11-Jul-2016	4,846,266	\$30.33	0.4%	0.3%	0.3%	0.9%	(0.5%)	(0.30)	76.7%
[848]	12-Jul-2016	5,578,485	\$30.74	1.4%	0.7%	(0.2%)	0.7%	0.6%	0.37	71.2%
[849]	13-Jul-2016	3,948,821	\$30.88	0.5%	0.0%	0.4%	0.6%	(0.1%)	(0.07)	94.0%
[850]	14-Jul-2016	4,369,182	\$31.30	1.4%	0.5%	(0.7%)	(0.0%)	1.4%	0.82	41.6%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[851]	15-Jul-2016	4,568,449	\$31.32	0.1%	(0.1%)	0.2%	0.3%	(0.2%)	(0.14)	88.8%
[852]	18-Jul-2016	4,912,949	\$30.92	(1.3%)	0.2%	(1.1%)	(0.7%)	(0.6%)	(0.34)	73.4%
[853]	19-Jul-2016	4,718,214	\$30.49	(1.4%)	(0.1%)	(1.0%)	(1.1%)	(0.3%)	(0.20)	84.3%
[854]	20-Jul-2016	4,001,603	\$30.55	0.2%	0.4%	(0.7%)	(0.1%)	0.3%	0.20	84.2%
[855]	21-Jul-2016	3,611,351	\$30.64	0.3%	(0.4%)	(1.3%)	(1.6%)	1.9%	1.11	27.0%
[856]	22-Jul-2016	2,287,295	\$30.90	0.8%	0.5%	2.0%	2.6%	(1.7%)	(0.99)	32.6%
[857]	25-Jul-2016	3,124,337	\$30.88	(0.1%)	(0.3%)	0.9%	0.6%	(0.7%)	(0.39)	69.4%
[858]	26-Jul-2016	2,496,035	\$30.63	(0.8%)	0.0%	(0.2%)	(0.1%)	(0.7%)	(0.43)	66.7%
[859]	27-Jul-2016	5,193,539	\$30.71	0.3%	(0.1%)	(0.3%)	(0.3%)	0.6%	0.34	73.3%
[860]	28-Jul-2016	3,467,834	\$30.83	0.4%	0.2%	(1.2%)	(0.8%)	1.2%	0.72	47.2%
[861]	29-Jul-2016	6,218,510	\$31.44	2.0%	0.2%	0.8%	0.9%	1.0%	0.62	53.7%
[862]	1-Aug-2016	8,014,692	\$31.02	(1.3%)	(0.1%)	(0.7%)	(0.6%)	(0.7%)	(0.41)	68.0%
[863]	2-Aug-2016	6,678,694	\$30.59	(1.4%)	(0.6%)	(1.3%)	(1.6%)	0.2%	0.13	89.4%
[864]	3-Aug-2016	6,568,465	\$30.51	(0.3%)	0.3%	(0.2%)	0.3%	(0.5%)	(0.32)	75.0%
[865]	4-Aug-2016	8,008,621	\$30.25	(0.9%)	0.0%	(0.2%)	(0.1%)	(0.8%)	(0.59)	55.8%
[866]	5-Aug-2016	4,790,409	\$29.88	(1.2%)	0.9%	(1.6%)	(0.1%)	(1.1%)	(0.83)	41.0%
[867]	8-Aug-2016	3,636,745	\$30.28	1.3%	(0.1%)	(0.7%)	(0.6%)	2.0%	1.53	12.8%
[868]	9-Aug-2016	2,885,037	\$30.15	(0.4%)	0.0%	0.2%	0.1%	(0.6%)	(0.43)	66.9%
[869]	10-Aug-2016	4,076,030	\$30.34	0.6%	(0.2%)	(0.7%)	(0.8%)	1.4%	1.12	26.5%
[870]	11-Aug-2016	3,928,280	\$30.42	0.3%	0.5%	(1.1%)	(0.2%)	0.5%	0.36	72.2%
[871]	12-Aug-2016	3,197,912	\$29.96	(1.5%)	(0.1%)	(0.9%)	(0.7%)	(0.8%)	(0.64)	52.3%
[872]	15-Aug-2016	2,279,672	\$30.02	0.2%	0.3%	(0.3%)	0.1%	0.1%	0.11	91.5%
[873]	16-Aug-2016	3,181,116	\$29.42	(2.0%)	(0.5%)	(1.1%)	(1.4%)	(0.6%)	(0.49)	62.7%
[874]	17-Aug-2016	3,933,090	\$29.25	(0.6%)	0.2%	(0.7%)	(0.3%)	(0.2%)	(0.19)	85.3%
[875]	18-Aug-2016	4,395,198	\$29.13	(0.4%)	0.2%	0.5%	0.5%	(0.9%)	(0.71)	48.1%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	t-Statistic	p-Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[876]	19-Aug-2016	4,681,371	\$28.84	(1.0%)	(0.1%)	(0.8%)	(0.8%)	(0.2%)	(0.17)	86.6%
[877]	22-Aug-2016	4,620,062	\$28.93	0.3%	(0.1%)	0.0%	(0.2%)	0.5%	0.38	70.4%
[878]	23-Aug-2016	2,737,608	\$29.10	0.6%	0.2%	0.0%	0.1%	0.5%	0.38	70.3%
[879]	24-Aug-2016	3,230,286	\$29.05	(0.2%)	(0.5%)	0.4%	(0.5%)	0.3%	0.23	81.6%
[880]	25-Aug-2016	3,530,221	\$29.15	0.3%	(0.1%)	0.7%	0.2%	0.1%	0.12	90.5%
[881]	26-Aug-2016	4,247,567	\$28.76	(1.3%)	(0.2%)	(0.3%)	(0.5%)	(0.8%)	(0.67)	50.7%
[882]	29-Aug-2016	4,011,342	\$28.75	(0.0%)	0.5%	0.9%	1.1%	(1.1%)	(0.90)	37.1%
[883]	30-Aug-2016	4,944,977	\$28.57	(0.6%)	(0.2%)	0.1%	(0.3%)	(0.3%)	(0.27)	78.8%
[884]	31-Aug-2016	4,472,605	\$27.80	(0.8%)	(0.2%)	0.5%	(0.1%)	(0.7%)	(0.60)	54.9%
[885]	1-Sep-2016	4,470,163	\$27.74	(0.2%)	(0.0%)	(1.0%)	(0.8%)	0.6%	0.45	65.6%
[886]	2-Sep-2016	3,048,215	\$27.94	0.7%	0.4%	0.8%	0.9%	(0.1%)	(0.12)	90.8%
[887]	6-Sep-2016	2,992,260	\$28.17	0.8%	0.3%	(0.2%)	0.1%	0.7%	0.57	57.2%
[888]	7-Sep-2016	3,210,762	\$28.40	0.8%	0.0%	0.8%	0.3%	0.5%	0.38	70.3%
[889]	8-Sep-2016	3,404,237	\$28.35	(0.2%)	(0.2%)	0.2%	(0.2%)	0.0%	0.04	97.1%
[890]	9-Sep-2016	7,008,383	\$27.86	(1.7%)	(2.5%)	(0.8%)	(3.5%)	1.8%	1.42	15.7%
[891]	12-Sep-2016	4,771,966	\$28.04	0.6%	1.5%	1.9%	2.8%	(2.1%)	(1.69)	9.3%
[892]	13-Sep-2016	4,497,058	\$27.44	(2.1%)	(1.5%)	(0.9%)	(2.2%)	0.1%	0.06	95.4%
[893]	14-Sep-2016	2,958,109	\$27.43	(0.0%)	(0.1%)	(0.0%)	(0.2%)	0.1%	0.11	91.0%
[894]	15-Sep-2016	7,598,614	\$26.98	(1.6%)	1.0%	0.3%	1.2%	(2.8%)	(2.34)	2.1%
[895]	16-Sep-2016	7,114,403	\$26.89	(0.3%)	(0.4%)	(0.0%)	(0.6%)	0.2%	0.18	85.9%
[896]	19-Sep-2016	4,457,047	\$27.04	0.6%	(0.0%)	0.3%	0.0%	0.6%	0.45	65.2%
[897]	20-Sep-2016	3,345,411	\$26.75	(1.1%)	0.0%	(1.3%)	(0.8%)	(0.3%)	(0.20)	84.2%
[898]	21-Sep-2016	4,296,810	\$26.92	0.6%	1.1%	(0.5%)	0.7%	(0.1%)	(0.07)	94.3%
[899]	22-Sep-2016	5,094,979	\$27.61	2.6%	0.7%	1.2%	1.2%	1.4%	1.11	27.0%
[900]	23-Sep-2016	3,853,878	\$27.42	(0.7%)	(0.6%)	0.8%	(0.3%)	(0.4%)	(0.33)	74.5%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	t-Statistic	p-Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[901]	26-Sep-2016	2,357,661	\$27.31	(0.4%)	(0.9%)	0.2%	(1.0%)	0.6%	0.46	64.3%
[902]	27-Sep-2016	2,844,859	\$27.35	0.1%	0.6%	(0.1%)	0.5%	(0.3%)	(0.26)	79.6%
[903]	28-Sep-2016	2,598,215	\$27.55	0.7%	0.6%	0.1%	0.5%	0.3%	0.21	83.3%
[904]	29-Sep-2016	2,610,971	\$27.52	(0.1%)	(0.9%)	0.3%	(1.0%)	0.8%	0.68	50.0%
[905]	30-Sep-2016	3,363,364	\$27.43	(0.3%)	0.8%	(1.4%)	(0.1%)	(0.2%)	(0.15)	88.5%
[906]	3-Oct-2016	3,048,400	\$27.52	0.3%	(0.3%)	0.2%	(0.3%)	0.7%	0.55	58.4%
[907]	4-Oct-2016	4,342,517	\$27.08	(1.6%)	(0.5%)	(0.3%)	(0.8%)	(0.8%)	(0.64)	52.5%
[908]	5-Oct-2016	4,826,467	\$27.03	(0.2%)	0.5%	(0.9%)	(0.2%)	(0.0%)	(0.01)	99.3%
[909]	6-Oct-2016	3,531,399	\$26.97	(0.2%)	0.1%	(0.7%)	(0.5%)	0.3%	0.25	80.3%
[910]	7-Oct-2016	13,519,671	\$27.76	2.9%	(0.3%)	(0.2%)	(0.6%)	3.5%	2.85	0.5%
[911]	10-Oct-2016	3,118,235	\$27.84	0.3%	0.5%	0.7%	0.7%	(0.5%)	(0.36)	72.2%
[912]	11-Oct-2016	5,412,856	\$27.64	(0.7%)	(1.2%)	0.6%	(1.1%)	0.4%	0.29	77.0%
[913]	12-Oct-2016	2,580,380	\$27.57	(0.3%)	0.1%	0.0%	0.0%	(0.3%)	(0.24)	80.8%
[914]	13-Oct-2016	2,750,712	\$27.39	(0.7%)	(0.3%)	(0.1%)	(0.4%)	(0.2%)	(0.17)	86.3%
[915]	14-Oct-2016	2,003,263	\$27.34	(0.2%)	0.0%	0.0%	(0.0%)	(0.1%)	(0.11)	91.4%
[916]	17-Oct-2016	3,118,122	\$27.37	0.1%	(0.3%)	0.2%	(0.3%)	0.4%	0.35	73.1%
[917]	18-Oct-2016	3,770,437	\$27.90	1.9%	0.6%	0.0%	0.5%	1.4%	1.13	25.9%
[918]	19-Oct-2016	3,274,349	\$28.18	1.0%	0.2%	0.2%	0.3%	0.7%	0.60	54.8%
[919]	20-Oct-2016	4,336,602	\$27.97	(0.7%)	(0.1%)	(1.1%)	(0.8%)	0.1%	0.05	96.0%
[920]	21-Oct-2016	4,790,620	\$28.21	0.9%	(0.0%)	(0.5%)	(0.3%)	1.2%	0.97	33.3%
[921]	24-Oct-2016	3,193,735	\$28.32	0.4%	0.5%	1.0%	0.9%	(0.5%)	(0.43)	66.7%
[922]	25-Oct-2016	3,390,382	\$28.45	0.5%	(0.4%)	(0.8%)	(0.8%)	1.3%	1.06	29.3%
[923]	26-Oct-2016	3,289,316	\$28.25	(0.7%)	(0.2%)	(0.3%)	(0.2%)	(0.5%)	(0.48)	63.5%
[924]	27-Oct-2016	36,625,594	\$31.00	9.7%	(0.3%)	1.7%	0.2%	9.6%	9.71	0.0%
[925]	28-Oct-2016	15,382,989	\$30.39	(2.0%)	(0.3%)	(0.5%)	(0.4%)	(1.5%)	(1.18)	24.0%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[926]	31-Oct-2016	71,943,608	\$26.58	(12.5%)	(0.0%)	0.2%	0.2%	(12.7%)	(9.82)	0.0%
[927]	1-Nov-2016	36,114,903	\$24.97	(6.1%)	(0.7%)	(1.0%)	(1.2%)	(4.9%)	(2.77)	0.6%
[928]	2-Nov-2016	21,126,829	\$24.18	(3.2%)	(0.6%)	(2.7%)	(2.3%)	(0.8%)	(0.44)	65.8%
[929]	3-Nov-2016	30,038,531	\$23.00	(4.9%)	(0.4%)	(0.1%)	(0.6%)	(4.3%)	(2.39)	1.9%
[930]	4-Nov-2016	21,633,402	\$23.05	0.2%	(0.2%)	1.4%	0.6%	(0.4%)	(0.21)	83.8%
[931]	7-Nov-2016	21,786,932	\$23.32	1.2%	2.2%	(1.8%)	1.0%	0.1%	0.08	94.0%
[932]	8-Nov-2016	15,356,221	\$24.16	3.6%	0.4%	1.0%	1.0%	2.6%	1.41	16.1%
[933]	9-Nov-2016	10,430,158	\$24.29	0.5%	1.1%	1.1%	1.9%	(1.3%)	(0.71)	47.8%
[934]	10-Nov-2016	15,049,897	\$23.81	(2.0%)	0.2%	(2.5%)	(1.7%)	(0.3%)	(0.14)	89.3%
[935]	11-Nov-2016	9,553,943	\$23.80	(0.0%)	(0.1%)	1.5%	0.8%	(0.9%)	(0.47)	63.8%
[936]	14-Nov-2016	12,285,568	\$24.31	2.1%	0.0%	(0.1%)	(0.1%)	2.3%	1.25	21.4%
[937]	15-Nov-2016	12,754,196	\$24.72	1.7%	0.8%	(0.5%)	0.4%	1.3%	0.72	47.6%
[938]	16-Nov-2016	8,711,404	\$24.52	(0.8%)	(0.1%)	0.6%	0.2%	(1.0%)	(0.56)	57.7%
[939]	17-Nov-2016	8,752,426	\$24.26	(1.1%)	0.5%	(0.3%)	0.2%	(1.3%)	(0.68)	50.0%
[940]	18-Nov-2016	9,857,792	\$24.79	2.2%	(0.2%)	1.1%	0.4%	1.8%	0.95	34.3%
[941]	21-Nov-2016	11,041,944	\$25.54	3.0%	0.7%	0.5%	1.1%	2.0%	1.05	29.4%
[942]	22-Nov-2016	10,374,077	\$25.24	(1.2%)	0.2%	1.3%	1.1%	(2.3%)	(1.21)	22.9%
[943]	23-Nov-2016	8,863,134	\$24.40	(1.2%)	0.1%	0.4%	0.3%	(1.5%)	(0.79)	43.0%
[944]	25-Nov-2016	3,946,661	\$24.66	1.1%	0.4%	0.3%	0.6%	0.5%	0.27	78.8%
[945]	28-Nov-2016	7,507,284	\$24.64	(0.1%)	(0.5%)	0.8%	(0.0%)	(0.0%)	(0.02)	98.6%
[946]	29-Nov-2016	8,364,012	\$24.21	(1.7%)	0.2%	(0.3%)	(0.1%)	(1.6%)	(0.87)	38.9%
[947]	30-Nov-2016	13,063,881	\$23.52	(2.9%)	(0.2%)	(1.6%)	(1.6%)	(1.3%)	(0.66)	51.0%
[948]	1-Dec-2016	10,562,258	\$23.74	0.9%	(0.3%)	0.2%	(0.3%)	1.2%	0.66	51.1%
[949]	2-Dec-2016	5,972,195	\$23.92	0.8%	0.0%	0.5%	0.3%	0.4%	0.24	81.1%
[950]	5-Dec-2016	9,987,060	\$24.19	1.1%	0.6%	0.6%	1.0%	0.1%	0.07	94.0%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[951]	6-Dec-2016	6,004,319	\$24.01	(0.7%)	0.3%	0.5%	0.7%	(1.4%)	(0.77)	44.5%
[952]	7-Dec-2016	6,772,046	\$24.28	1.1%	1.3%	1.3%	2.4%	(1.2%)	(0.64)	52.1%
[953]	8-Dec-2016	7,191,481	\$24.13	(0.6%)	0.2%	0.5%	0.5%	(1.1%)	(0.60)	55.0%
[954]	9-Dec-2016	7,962,690	\$24.12	(0.0%)	0.6%	(0.8%)	(0.1%)	0.0%	0.03	97.9%
[955]	12-Dec-2016	7,229,393	\$23.93	(0.8%)	(0.1%)	(1.4%)	(1.4%)	0.6%	0.30	76.2%
[956]	13-Dec-2016	10,799,944	\$24.43	2.1%	0.7%	0.1%	0.7%	1.4%	0.77	44.3%
[957]	14-Dec-2016	8,607,560	\$23.87	(2.3%)	(0.8%)	0.8%	(0.4%)	(1.9%)	(1.01)	31.4%
[958]	15-Dec-2016	9,779,183	\$23.97	0.4%	0.4%	0.1%	0.4%	0.0%	0.02	98.1%
[959]	16-Dec-2016	11,383,948	\$24.17	0.8%	(0.2%)	0.6%	0.1%	0.7%	0.40	69.0%
[960]	19-Dec-2016	5,889,633	\$24.19	0.1%	0.2%	2.3%	1.8%	(1.7%)	(0.89)	37.4%
[961]	20-Dec-2016	6,605,028	\$24.13	(0.2%)	0.4%	0.2%	0.4%	(0.6%)	(0.34)	73.5%
[962]	21-Dec-2016	6,241,389	\$23.77	(1.5%)	(0.2%)	(0.6%)	(0.8%)	(0.7%)	(0.35)	72.3%
[963]	22-Dec-2016	6,008,912	\$23.87	0.4%	(0.2%)	1.7%	0.8%	(0.4%)	(0.22)	82.9%
[964]	23-Dec-2016	6,512,200	\$24.06	0.8%	0.1%	0.8%	0.5%	0.3%	0.16	87.4%
[965]	27-Dec-2016	3,957,663	\$24.14	0.3%	0.2%	(0.3%)	(0.1%)	0.5%	0.26	79.5%
[966]	28-Dec-2016	5,067,166	\$24.03	(0.5%)	(0.8%)	0.1%	(1.0%)	0.5%	0.28	78.0%
[967]	29-Dec-2016	4,556,755	\$24.03	-	(0.0%)	(0.0%)	(0.2%)	0.2%	0.13	89.4%
[968]	30-Dec-2016	6,971,357	\$23.78	(1.0%)	(0.5%)	(0.2%)	(0.8%)	(0.3%)	(0.16)	87.6%
[969]	3-Jan-2017	17,376,398	\$25.35	6.6%	0.9%	3.7%	3.3%	3.3%	1.68	9.5%
[970]	4-Jan-2017	10,443,772	\$25.48	0.5%	0.6%	0.6%	1.0%	(0.5%)	(0.26)	79.3%
[971]	5-Jan-2017	7,921,741	\$25.50	0.1%	(0.1%)	(0.8%)	(1.0%)	1.0%	0.56	57.8%
[972]	6-Jan-2017	5,736,182	\$25.38	(0.5%)	0.4%	(1.9%)	(1.4%)	0.9%	0.47	63.7%
[973]	9-Jan-2017	6,765,279	\$25.23	(0.6%)	(0.4%)	(0.8%)	(1.2%)	0.6%	0.30	76.3%
[974]	10-Jan-2017	8,274,952	\$25.20	(0.1%)	0.0%	0.9%	0.6%	(0.7%)	(0.38)	70.4%
[975]	11-Jan-2017	5,567,042	\$25.24	0.2%	0.3%	(0.8%)	(0.5%)	0.7%	0.36	71.8%

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				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	t-Statistic	p-Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[976]	12-Jan-2017	7,340,834	\$25.18	(0.2%)	(0.2%)	(0.4%)	(0.7%)	0.5%	0.25	80.2%
[977]	13-Jan-2017	5,313,070	\$25.26	0.3%	0.2%	0.6%	0.5%	(0.2%)	(0.10)	91.9%
[978]	17-Jan-2017	7,753,882	\$25.47	0.8%	(0.3%)	0.3%	(0.2%)	1.0%	0.56	57.9%
[979]	18-Jan-2017	5,841,822	\$25.47	-	0.2%	(1.2%)	(0.9%)	0.9%	0.51	61.4%
[980]	19-Jan-2017	4,364,224	\$25.50	0.1%	(0.4%)	0.4%	(0.2%)	0.3%	0.19	85.2%
[981]	20-Jan-2017	4,866,482	\$25.56	0.2%	0.3%	(0.4%)	(0.1%)	0.4%	0.21	83.6%
[982]	23-Jan-2017	4,439,750	\$25.81	1.0%	(0.3%)	0.8%	0.2%	0.7%	0.39	69.4%
[983]	24-Jan-2017	5,655,133	\$25.57	(0.9%)	0.7%	(1.5%)	(0.8%)	(0.2%)	(0.09)	92.8%
[984]	25-Jan-2017	7,489,213	\$25.69	0.5%	0.8%	(1.0%)	(0.2%)	0.7%	0.36	71.7%
[985]	26-Jan-2017	7,653,733	\$26.06	1.4%	(0.1%)	0.8%	0.4%	1.0%	0.54	59.2%
[986]	27-Jan-2017	4,935,059	\$25.96	(0.4%)	(0.1%)	1.2%	0.8%	(1.2%)	(0.63)	52.9%
[987]	30-Jan-2017	4,880,701	\$25.81	(0.6%)	(0.6%)	(0.1%)	(0.8%)	0.2%	0.10	91.9%
[988]	31-Jan-2017	11,316,042	\$25.86	0.2%	(0.1%)	0.1%	(0.1%)	0.3%	0.16	87.3%
[989]	1-Feb-2017	8,832,817	\$25.51	(1.4%)	0.1%	(2.7%)	(2.3%)	1.0%	0.51	61.3%
[990]	2-Feb-2017	6,190,566	\$25.26	(1.0%)	0.1%	(1.0%)	(0.9%)	(0.1%)	(0.04)	96.6%
[991]	3-Feb-2017	5,228,391	\$25.42	0.6%	0.7%	0.1%	0.7%	(0.0%)	(0.02)	98.2%
[992]	6-Feb-2017	6,353,023	\$25.05	(1.5%)	(0.2%)	(1.6%)	(1.6%)	0.2%	0.10	91.9%
[993]	7-Feb-2017	6,022,232	\$24.88	(0.7%)	0.0%	(0.8%)	(0.7%)	0.1%	0.03	97.3%
[994]	8-Feb-2017	13,671,506	\$24.43	(1.8%)	0.1%	0.1%	0.1%	(1.9%)	(1.03)	30.6%
[995]	9-Feb-2017	10,179,851	\$24.42	(0.0%)	0.6%	0.1%	0.5%	(0.6%)	(0.30)	76.3%
[996]	10-Feb-2017	5,882,601	\$24.49	0.3%	0.4%	0.2%	0.4%	(0.1%)	(0.07)	94.4%
[997]	13-Feb-2017	6,555,986	\$24.62	0.5%	0.6%	(1.0%)	(0.4%)	0.9%	0.50	61.6%
[998]	14-Feb-2017	4,962,947	\$24.54	(0.3%)	0.4%	(0.4%)	(0.1%)	(0.3%)	(0.15)	88.4%
[999]	15-Feb-2017	5,599,574	\$24.40	(0.6%)	0.5%	(1.4%)	(0.7%)	0.2%	0.09	92.7%
[1000]	16-Feb-2017	5,162,872	\$24.28	(0.5%)	(0.1%)	(0.0%)	(0.3%)	(0.2%)	(0.13)	89.8%

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ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[1001]	17-Feb-2017	5,122,976	\$24.28	-	0.2%	0.7%	0.5%	(0.5%)	(0.29)	77.1%
[1002]	21-Feb-2017	6,846,831	\$24.67	1.6%	0.6%	(0.2%)	0.3%	1.3%	0.71	47.6%
[1003]	22-Feb-2017	6,431,600	\$24.83	0.6%	(0.1%)	0.5%	0.1%	0.5%	0.28	77.6%
[1004]	23-Feb-2017	6,597,988	\$24.71	(0.5%)	0.1%	(1.2%)	(1.1%)	0.6%	0.31	76.0%
[1005]	24-Feb-2017	6,056,642	\$24.58	(0.5%)	0.2%	(1.5%)	(1.2%)	0.6%	0.35	73.0%
[1006]	27-Feb-2017	6,722,186	\$24.61	0.1%	0.1%	0.8%	0.6%	(0.5%)	(0.25)	80.5%
[1007]	28-Feb-2017	13,031,838	\$24.26	(1.4%)	(0.3%)	(2.1%)	(2.1%)	0.6%	0.34	73.5%
[1008]	1-Mar-2017	14,735,804	\$24.04	1.3%	1.4%	(0.6%)	0.7%	0.6%	0.31	75.5%
[1009]	2-Mar-2017	10,003,104	\$23.53	(2.1%)	(0.6%)	(0.6%)	(1.2%)	(0.9%)	(0.50)	62.0%
[1010]	3-Mar-2017	8,419,064	\$23.48	(0.2%)	0.1%	(0.4%)	(0.5%)	0.3%	0.14	88.8%
[1011]	6-Mar-2017	8,175,124	\$23.10	(1.6%)	(0.3%)	(0.5%)	(1.0%)	(0.6%)	(0.35)	72.8%
[1012]	7-Mar-2017	11,620,855	\$22.50	(2.6%)	(0.3%)	(1.0%)	(1.3%)	(1.3%)	(0.68)	49.8%
[1013]	8-Mar-2017	7,310,167	\$22.45	(0.2%)	(0.2%)	(0.3%)	(0.7%)	0.5%	0.26	79.2%
[1014]	9-Mar-2017	7,984,260	\$22.73	1.2%	0.1%	0.6%	0.4%	0.8%	0.46	64.6%
[1015]	10-Mar-2017	6,382,025	\$23.14	1.8%	0.3%	0.0%	0.2%	1.6%	0.87	38.6%
[1016]	13-Mar-2017	8,358,911	\$23.46	1.4%	0.1%	0.8%	0.6%	0.8%	0.41	68.0%
[1017]	14-Mar-2017	5,893,068	\$23.34	(0.5%)	(0.3%)	(0.6%)	(1.1%)	0.6%	0.31	75.6%
[1018]	15-Mar-2017	10,642,838	\$23.77	1.8%	0.8%	0.6%	1.4%	0.4%	0.23	81.6%
[1019]	16-Mar-2017	10,728,969	\$23.37	(1.7%)	(0.2%)	0.9%	0.4%	(2.1%)	(1.14)	25.6%
[1020]	17-Mar-2017	24,891,583	\$23.65	1.2%	(0.1%)	0.8%	0.3%	0.9%	0.48	63.4%
[1021]	20-Mar-2017	8,138,955	\$23.64	(0.0%)	(0.2%)	0.6%	0.1%	(0.1%)	(0.08)	93.6%
[1022]	21-Mar-2017	7,234,732	\$23.36	(1.2%)	(1.2%)	0.3%	(1.5%)	0.3%	0.17	86.2%
[1023]	22-Mar-2017	12,577,325	\$22.81	(2.4%)	0.2%	(2.0%)	(1.6%)	(0.8%)	(0.41)	68.5%
[1024]	23-Mar-2017	6,887,351	\$22.64	(0.7%)	(0.1%)	0.1%	(0.2%)	(0.5%)	(0.29)	77.0%
[1025]	24-Mar-2017	5,890,158	\$22.76	0.5%	(0.1%)	0.4%	(0.0%)	0.5%	0.29	77.0%

EXHIBIT 36
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Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[1026]	27-Mar-2017	9,057,861	\$22.61	(0.7%)	(0.1%)	(0.8%)	(1.0%)	0.4%	0.19	84.7%
[1027]	28-Mar-2017	7,325,754	\$22.52	(0.4%)	0.7%	(0.8%)	0.1%	(0.5%)	(0.28)	78.1%
[1028]	29-Mar-2017	8,208,235	\$23.09	2.5%	0.1%	0.7%	0.6%	1.9%	1.06	29.2%
[1029]	30-Mar-2017	7,466,212	\$23.41	1.4%	0.3%	0.8%	0.9%	0.5%	0.26	79.7%
[1030]	31-Mar-2017	7,533,614	\$23.57	0.7%	(0.2%)	0.3%	(0.2%)	0.9%	0.48	63.1%
[1031]	3-Apr-2017	6,992,549	\$23.60	0.1%	(0.2%)	(0.4%)	(0.7%)	0.9%	0.47	63.6%
[1032]	4-Apr-2017	12,820,344	\$23.96	1.5%	0.1%	3.0%	2.6%	(1.0%)	(0.55)	58.7%
[1033]	5-Apr-2017	12,561,386	\$24.21	1.0%	(0.3%)	0.0%	(0.6%)	1.6%	0.90	37.1%
[1034]	6-Apr-2017	7,640,759	\$24.46	1.0%	0.2%	0.1%	0.2%	0.9%	0.47	64.1%
[1035]	7-Apr-2017	9,662,269	\$24.54	0.3%	(0.1%)	0.5%	0.1%	0.2%	0.10	91.7%
[1036]	10-Apr-2017	8,136,814	\$24.87	1.3%	0.1%	0.5%	0.4%	1.0%	0.52	60.1%
[1037]	11-Apr-2017	8,899,935	\$24.90	0.1%	(0.1%)	0.5%	0.1%	0.0%	0.00	99.9%
[1038]	12-Apr-2017	10,806,222	\$25.14	1.0%	(0.4%)	1.0%	0.2%	0.7%	0.40	68.8%
[1039]	13-Apr-2017	9,958,699	\$25.12	(0.1%)	(0.7%)	(0.0%)	(1.1%)	1.0%	0.55	58.2%
[1040]	17-Apr-2017	7,318,113	\$25.30	0.7%	0.9%	0.2%	1.2%	(0.5%)	(0.25)	80.2%
[1041]	18-Apr-2017	7,294,946	\$25.06	(0.9%)	(0.3%)	0.5%	(0.1%)	(0.9%)	(0.48)	63.5%
[1042]	19-Apr-2017	11,207,568	\$25.29	0.9%	(0.2%)	0.8%	0.3%	0.6%	0.32	74.8%
[1043]	20-Apr-2017	8,716,160	\$25.49	0.8%	0.8%	(1.3%)	(0.3%)	1.1%	0.59	55.3%
[1044]	21-Apr-2017	7,432,209	\$25.32	(0.7%)	(0.3%)	(0.5%)	(1.0%)	0.3%	0.16	87.3%
[1045]	24-Apr-2017	7,725,596	\$25.45	0.5%	1.1%	(0.6%)	0.9%	(0.4%)	(0.24)	81.3%
[1046]	25-Apr-2017	11,383,337	\$25.93	1.9%	0.6%	0.8%	1.2%	0.7%	0.43	67.0%
[1047]	26-Apr-2017	8,972,261	\$25.87	(0.2%)	(0.0%)	0.6%	0.3%	(0.5%)	(0.45)	65.1%
[1048]	27-Apr-2017	12,119,332	\$25.79	(0.3%)	0.1%	(0.5%)	(0.4%)	0.1%	0.05	96.0%
[1049]	28-Apr-2017	11,581,185	\$25.67	(0.5%)	(0.2%)	(1.1%)	(1.0%)	0.6%	0.55	58.2%
[1050]	1-May-2017	9,827,091	\$25.38	(1.1%)	0.2%	(0.6%)	(0.2%)	(0.9%)	(0.92)	35.7%

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ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

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	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[1051]	2-May-2017	9,168,370	\$25.95	2.2%	0.1%	0.3%	0.3%	1.9%	1.97	5.1%
[1052]	3-May-2017	10,400,439	\$25.42	(2.0%)	(0.1%)	(3.6%)	(2.8%)	0.7%	0.69	49.2%
[1053]	4-May-2017	28,643,399	\$23.74	(6.6%)	0.1%	(2.0%)	(1.4%)	(5.2%)	(5.37)	0.0%
[1054]	5-May-2017	12,349,560	\$23.60	(0.6%)	0.4%	1.3%	1.5%	(2.1%)	(1.91)	5.8%
[1055]	8-May-2017	26,016,453	\$24.80	5.1%	0.0%	0.6%	0.4%	4.7%	4.34	0.0%
[1056]	9-May-2017	10,142,206	\$25.03	0.9%	(0.1%)	(0.6%)	(0.7%)	1.6%	1.37	17.3%
[1057]	10-May-2017	7,954,707	\$25.11	0.3%	0.2%	(0.4%)	(0.2%)	0.5%	0.46	64.7%
[1058]	11-May-2017	8,698,798	\$24.44	(2.7%)	(0.2%)	(1.9%)	(1.8%)	(0.9%)	(0.76)	44.7%
[1059]	12-May-2017	8,659,596	\$24.63	0.8%	(0.1%)	1.7%	1.2%	(0.4%)	(0.35)	72.8%
[1060]	15-May-2017	6,936,757	\$24.81	0.7%	0.5%	(0.2%)	0.4%	0.3%	0.25	80.1%
[1061]	16-May-2017	8,663,935	\$24.77	(0.2%)	(0.0%)	0.5%	0.3%	(0.4%)	(0.38)	70.2%
[1062]	17-May-2017	9,125,637	\$24.55	(0.9%)	(1.8%)	(0.0%)	(2.2%)	1.4%	1.13	26.2%
[1063]	18-May-2017	7,472,561	\$24.59	0.2%	0.4%	0.5%	0.8%	(0.6%)	(0.56)	57.5%
[1064]	19-May-2017	10,497,668	\$24.87	1.1%	0.7%	0.6%	1.2%	(0.0%)	(0.04)	97.0%
[1065]	22-May-2017	7,275,321	\$24.95	0.3%	0.5%	(0.1%)	0.4%	(0.1%)	(0.11)	90.9%
[1066]	23-May-2017	7,264,082	\$25.19	1.0%	0.2%	(0.3%)	(0.1%)	1.0%	0.94	35.0%
[1067]	24-May-2017	5,120,307	\$24.96	(0.9%)	0.3%	(0.5%)	(0.1%)	(0.8%)	(0.74)	46.3%
[1068]	25-May-2017	5,796,190	\$24.93	(0.1%)	0.5%	(0.0%)	0.5%	(0.6%)	(0.53)	59.5%
[1069]	26-May-2017	4,897,035	\$24.80	(0.5%)	0.0%	(0.2%)	(0.2%)	(0.4%)	(0.33)	73.9%
[1070]	30-May-2017	7,544,912	\$24.98	0.7%	(0.1%)	0.3%	0.1%	0.6%	0.60	54.8%
[1071]	31-May-2017	11,658,968	\$24.95	(0.1%)	(0.0%)	0.1%	0.0%	(0.1%)	(0.14)	89.1%
[1072]	1-Jun-2017	20,750,437	\$25.87	5.9%	0.8%	0.5%	1.2%	4.6%	4.29	0.0%
[1073]	2-Jun-2017	9,154,104	\$25.87	-	0.4%	0.9%	1.3%	(1.3%)	(1.10)	27.3%
[1074]	5-Jun-2017	7,532,570	\$25.85	(0.1%)	(0.1%)	(0.0%)	(0.2%)	0.1%	0.07	94.3%
[1075]	6-Jun-2017	8,653,785	\$25.84	(0.0%)	(0.3%)	0.8%	0.3%	(0.3%)	(0.28)	77.7%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

				CTL	Market	Excess	Predicted	Deal Model		
	Date	Volume	Price	Return	Return	Industry	Return	Abnormal	t-Statistic	p-Value
	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]
[1076]	7-Jun-2017	6,632,403	\$25.79	(0.2%)	0.2%	(0.8%)	(0.4%)	0.2%	0.21	83.5%
[1077]	8-Jun-2017	7,032,499	\$25.98	0.7%	0.0%	0.4%	0.4%	0.4%	0.34	73.5%
[1078]	9-Jun-2017	10,329,524	\$26.11	0.5%	(0.1%)	(0.4%)	(0.4%)	0.9%	0.81	41.7%
[1079]	12-Jun-2017	10,001,215	\$26.60	1.9%	(0.1%)	1.7%	1.4%	0.5%	0.43	66.7%
[1080]	13-Jun-2017	10,276,780	\$27.24	2.4%	0.5%	(0.5%)	0.2%	2.2%	1.95	5.3%
[1081]	14-Jun-2017	10,311,725	\$27.31	0.3%	(0.1%)	(0.2%)	(0.2%)	0.5%	0.40	68.8%
[1082]	15-Jun-2017	11,894,006	\$26.95	(1.3%)	(0.2%)	(0.2%)	(0.4%)	(0.9%)	(0.84)	40.2%
[1083]	16-Jun-2017	43,059,324	\$25.72	(4.6%)	0.0%	0.5%	0.5%	(5.1%)	(4.54)	0.0%
[1084]	19-Jun-2017	18,616,638	\$25.36	(1.4%)	0.8%	(1.8%)	(0.6%)	(0.8%)	(0.68)	49.9%
[1085]	20-Jun-2017	21,075,049	\$24.70	(2.6%)	(0.7%)	(0.8%)	(1.5%)	(1.1%)	(0.92)	36.1%
[1086]	21-Jun-2017	14,707,254	\$24.44	(1.1%)	(0.0%)	(1.1%)	(1.1%)	0.0%	0.04	96.8%
[1087]	22-Jun-2017	10,092,164	\$24.35	(0.4%)	(0.0%)	0.2%	0.1%	(0.5%)	(0.40)	68.9%
[1088]	23-Jun-2017	6,331,618	\$24.41	0.2%	0.2%	0.9%	1.0%	(0.7%)	(0.61)	54.3%
[1089]	26-Jun-2017	6,548,463	\$24.55	0.6%	0.0%	0.1%	0.1%	0.5%	0.40	69.2%
[1090]	27-Jun-2017	7,425,723	\$24.56	0.0%	(0.8%)	0.4%	(0.6%)	0.6%	0.51	61.2%
[1091]	28-Jun-2017	10,785,646	\$24.86	1.2%	0.9%	0.8%	1.5%	(0.3%)	(0.23)	81.7%
[1092]	29-Jun-2017	8,324,969	\$24.18	(2.7%)	(0.9%)	(0.1%)	(1.0%)	(1.8%)	(1.45)	14.9%
[1093]	30-Jun-2017	8,531,499	\$23.88	(1.2%)	0.2%	(0.0%)	0.1%	(1.3%)	(1.12)	26.5%
[1094]	3-Jul-2017	5,541,467	\$23.97	0.4%	0.2%	0.3%	0.5%	(0.1%)	(0.08)	93.4%
[1095]	5-Jul-2017	10,607,772	\$23.74	(1.0%)	0.2%	(1.1%)	(0.8%)	(0.2%)	(0.14)	89.0%
[1096]	6-Jul-2017	8,895,865	\$23.90	0.7%	(0.9%)	(0.3%)	(1.3%)	2.0%	1.61	11.0%
[1097]	7-Jul-2017	7,861,457	\$23.60	(1.3%)	0.6%	(0.7%)	0.0%	(1.3%)	(1.03)	30.3%
[1098]	10-Jul-2017	4,660,831	\$23.47	(0.6%)	0.1%	0.0%	0.1%	(0.6%)	(0.49)	62.3%
[1099]	11-Jul-2017	6,023,054	\$23.25	(0.9%)	(0.1%)	(1.6%)	(1.5%)	0.6%	0.47	64.2%

EXHIBIT 36
ABNORMAL RETURNS ALL CLASS PERIOD DATES
Using Deal Model

			CTL		Market	Excess	Predicted	Deal Model		
			Return	Return	Return	Return	Return	Abnormal	<i>t</i> -Statistic	<i>p</i> -Value
			[D]	[E]	[F]	[G]	[H]	[I]	[J]	
			[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
			Date	Volume	Price	Return	Return	Return	Return	Return
[1100]	12-Jul-2017	14,884,782	\$22.50	(3.2%)	0.7%	(0.3%)	0.4%	(3.6%)	(2.96)	0.4%

Notes and Sources:

All regression results are based on the Deal Model as described in Exhibit 26B.

[A] Dates reflect all trading session within the Class Period.

[B]-[E] From Bloomberg.

[F]-[J] See Footnotes to Exhibit 18A for variable definitions.

[K] Indicates if a date is an alleged inflationary date or alleged curative disclosure date.

EXHIBIT 37
KEY EVENTS RELATED TO CENTURYLINK
2013 - 2017

	Date (U.S. ET)	Time Stamp (U.S. ET)	Source/Headline	Detailed Description
	[A]	[B]	[C]	[D]
[1]	8-Jan-13	12:00 PM	CenturyLink News Release, December 21, 2012	CenturyLink Presents at Citigroup Global Internet, Media & Telecommunications Conference
[2]	13-Feb-13	4:18 PM	SEC EDGAR, February 13, 2013	CenturyLink reports fourth quarter and full-year 2012 earnings, and provides earnings guidance for the first quarter and full-year of 2013
[3]	13-Feb-13	7:18 PM	Forbes, <i>CenturyLink Shares Swoon on 26% Dividend Cut</i> , February 13, 2013	CenturyLink announces a 26% reduction in its quarterly dividend. The company plans to reduce the rate to 54 cents quarterly, from 72.5 cents... the yield based on today's regular session close falls to 5.2%. The company also said its board has adopted a \$2 billion stock repurchase program. CenturyLink also said it plans to use a portion of free cash flow generated in 2013 and 2014 to repay debt... Meanwhile, the company posted Q4 results that were about in line with estimates.
[4]	26-Feb-13	4:20 PM	CenturyLink News Release, February 21, 2013	CenturyLink presents at Morgan Stanley Technology, Media & Telecom Conference
[5]	1-Mar-13	12:43 PM	SEC EDGAR, March 1, 2013	CenturyLink files 2012 10-K.
[6]	5-Mar-13		CenturyLink News Release, February 21, 2013	CenturyLink presents at Raymond James' 34th Annual Institutional Investors Conference
[7]	8-May-13	4:27 PM	SEC EDGAR, May 8, 2013	CenturyLink reports first quarter 2013 earnings; provides earnings guidance for the second quarter of 2013; increases earnings guidance for the full year 2013
[8]	10-May-13	12:17 PM	SEC EDGAR, May 10, 2013	CenturyLink files first quarter 2013 10-Q
[9]	30-May-13		Nomura News Release, May 24, 2013	CenturyLink presents at Nomura Global Media Summit 2013
[10]	5-Jun-13	3:42 PM	Scott + Scott LLP News Release, June 5, 2013	Scott+Scott, Attorneys at Law, LLP files a class action complaint against CenturyLink in the US District Court for the Southern District of New York. The securities class actions, which seeks remedies under the Securities Exchange Act of 1934, was filed on behalf of those persons and entities who purchased or otherwise acquired CenturyLink securities between August 8, 2012 and February 14, 2013, inclusive (the Class Period). The securities class action charges that, throughout the Class Period, CenturyLink made false and/or misleading statements to investors and failed to disclose material adverse facts concerning CenturyLink's dividend cut. Specifically, the complaint alleges that CenturyLink misled investors concerning the strength of its free cash flow, which was an important factor in the Company's ability to maintain its dividend levels.
[11]	7-Aug-13	4:05 PM	MarketWatch, <i>CenturyLink Reports Second Quarter 2013 Earnings</i> , August 7, 2013	CenturyLink reports second quarter 2013 earnings; provides earnings guidance for the third quarter and full-year of 2013
[12]	8-Aug-13	4:19 PM	SEC EDGAR, August 8, 2013	CenturyLink files second quarter 2013 10-Q
[13]	14-Aug-13	9:05 AM	CenturyLink News Release, July 17, 2013	CenturyLink presents at Oppenheimer 16h Annual Technology, Internet & Communications Conference
[14]	12-Sep-13	12:30 PM	CenturyLink News Release, September 3, 2013	CenturyLink presents at Bank of America Merrill Lynch 2013 Media, Communications & Entertainment Conference
[15]	6-Nov-13	4:07 PM	CenturyLink News Release, November 6, 2013	CenturyLink reports third quarter 2013 earnings; provides earnings guidance for the fourth quarter of 2013
[16]	8-Nov-13	8:50 PM	SEC EDGAR, November 8, 2013	CenturyLink files third quarter 2013 10-Q
[17]	19-Nov-13		CenturyLink News Release, November 19, 2013	CenturyLink completes acquisition of Tier 3 to accelerate cloud platform strategy

EXHIBIT 37
KEY EVENTS RELATED TO CENTURYLINK
2013 - 2017

	Date (U.S. ET)	Time Stamp (U.S. ET)	Source/Headline	Detailed Description
	[A]	[B]	[C]	[D]
[18]	10-Dec-13		CenturyLink News Release, December 9, 2013	CenturyLink presents at UBS 31st Annual Global Media & Communication Conference
[19]	7-Jan-14		CenturyLink News Release, December 18, 2013	CenturyLink presents at Citi 2014 Global Internet, Media & Telecommunications Conference
[20]	12-Feb-14	4:56 PM	SEC EDGAR, February 12, 2014	CenturyLink reports fourth quarter and full-year 2013 earnings, and provides earnings guidance for the first quarter and full-year of 2014
[21]	27-Feb-14	2:30 PM	SEC EDGAR, February 27, 2014	CenturyLink files 2013 10-K.
[22]	3-Mar-14	9:50 AM	CenturyLink News Release, January 24, 2014	CenturyLink presents at Raymond James 35th Annual Institutional Investors Conference
[23]	5-Mar-14	2:00 PM	CenturyLink News Release, January 24, 2014	CenturyLink presents at Morgan Stanley Technology, Media & Telecom Conference
[24]	11-Mar-14	10:45 AM	CenturyLink News Release, January 24, 2014	CenturyLink presents at Deutsche Bank 22nd Annual Media, Internet and Telecom Conference
[25]	7-May-14	4:34 PM	SEC EDGAR, May 7, 2014	CenturyLink reports first quarter 2014 earnings; provides earnings guidance for the second quarter of 2014
[26]	8-May-14	6:29 PM	SEC EDGAR, May 8, 2014	CenturyLink files first quarter 2014 10-Q
[27]	19-May-14	2:20 PM	CenturyLink News Release, April 14, 2014	CenturyLink presents at J.P. Morgan Global Technology, Media & Telecom Conference
[28]	3-Jun-14		CenturyLink News Release, May 5, 2014	CenturyLink presents at Bank of America Merrill Lynch 2014 Global Telecom & Media Conference
[29]	12-Jun-14	2:45 PM	Thomson Reuters News Release, June 20, 2014	CenturyLink presents at Morgan Stanley Leveraged Finance Conference
[30]	5-Aug-14		Washington Utilities and Transportation Commission, <i>CenturyLink fined \$30,000 for billion errors</i> , August 5, 2014	State regulators have fined CenturyLink \$31,300 for billing errors related to taxes and surcharges. The Washington Utilities and Transportation Commission (UTC) approved a settlement agreement after commission staff investigated the company and discovered violations of consumer protection laws and rules related to billing.
[31]	6-Aug-14	4:20 PM	SEC EDGAR, August 6, 2014	CenturyLink reports second quarter 2014 earnings; provides earnings guidance for the third quarter of 2014
[32]	7-Aug-14	1:19 PM	SEC EDGAR, August 7, 2014	CenturyLink files second quarter 2014 10-Q
[33]	13-Aug-14	9:45 AM	CenturyLink News Release, August 7, 2014	CenturyLink presents at Oppenheimer 17th Annual Technology, Internet & Communications Conference
[34]	11-Sep-14	3:45 PM	CenturyLink News Release, August 7, 2014	CenturyLink presents at Goldman Sachs 23rd Annual Communacopia Conference
[35]	5-Nov-14	4:24 PM	SEC EDGAR, November 5, 2014	CenturyLink reports third quarter 2014 earnings; provides earnings guidance for the fourth quarter of 2014
[36]	6-Nov-14	4:40 PM	SEC EDGAR, November 6, 2014	CenturyLink files third quarter 2014 10-Q
[37]	12-Nov-14	11:20 AM	CenturyLink News Release, October 24, 2014	CenturyLink presents at Wells Fargo Technology, Media and Telecom Conference 2014
[38]	8-Dec-14	9:00 AM	Forbes, <i>CenturyLink Acquires DataGardens to Strengthen its Disaster Recovery Options</i> , December 8, 2013	CenturyLink completes the acquisition of DataGardens Inc. from AVAC Ltd. And other shareholders
[39]	9-Dec-14	11:00 AM	CenturyLink News Release, October 24, 2014	CenturyLink presents at UBS 42st Annual Global Media & Communication Conference
[40]	11-Dec-14	4:30 AM	CenturyLink News Release, December 11, 2014	CenturyLink completes the acquisition of Cognilytics, Inc.

EXHIBIT 37
KEY EVENTS RELATED TO CENTURYLINK
2013 - 2017

	Date (U.S. ET)	Time Stamp (U.S. ET)	Source/Headline	Detailed Description
	[A]	[B]	[C]	[D]
[41]	6-Jan-15	2:45 PM	CenturyLink News Release, November 24, 2014	CenturyLink presents at Citi 25th Annual Global Internet, Media and Telecom Conference
[42]	11-Feb-15	4:20 PM	CenturyLink News Release, February 11, 2014	CenturyLink reports fourth quarter and full-year 2014 earnings, and provides earnings guidance for the first quarter and full-year of 2015
[43]	24-Feb-15	5:24 PM	SEC EDGAR, February 24, 2015	CenturyLink files 2014 10-K.
[44]	9-Mar-15	11:05 AM	CenturyLink News Release, February 13, 2015	CenturyLink presents at Deutsche Bank 2015 Media, Internet & Telecom Conference
[45]	15-Apr-15	6:20 AM	CenturyLink News Release, April 20, 2015	CenturyLink completes the acquisition of Orchestrate, Inc. from Trifork A/S, Frontline Ventures, Team Ventures, EPIC Ventures, True Ventures, Resonant Venture Partners and others
[46]	5-May-15	4:05 AM	CenturyLink News Release, May 5, 2015	CenturyLink reports first quarter 2015 earnings; provides earnings guidance for the second quarter of 2015
[47]	6-May-15	4:30 PM	SEC EDGAR, May 6, 2015	CenturyLink files first quarter 2015 10-Q
[48]	18-May-15	10:40 AM	CenturyLink News Release, May 1, 2015	CenturyLink presents at 43rd Annual J.P. Morgan Global Technology, Media and Telecom Conference
[49]	4-Jun-15	1:00 PM	CenturyLink News Release, May 27, 2015	CenturyLink presents at Morgan Stanley Leveraged Finance Conference
[50]	5-Aug-15	4:38 PM	SEC EDGAR, August 5, 2015	CenturyLink reports second quarter 2015 earnings; provides earnings guidance for the third quarter of 2015
[51]	6-Aug-15	3:05 PM	SEC EDGAR, August 6, 2015	CenturyLink files second quarter 2015 10-Q
[52]	12-Aug-15	10:25 AM	CenturyLink News Release, July 27, 2015	CenturyLink presents at Oppenheimer 18th Annual Technology, Internet & Communications Conference
[53]	10-Sep-15	9:46 PM	The News Tribune, <i>CenturyLink Fined \$2.9 Million for 911 System Failure</i> , September 10, 2015	CenturyLink admitted fault and agrees to pay a nearly \$2.9 million fine as part of a settlement for a statewide 911 outage last year.
[54]	10-Sep-15	2:15 PM	CenturyLink News Release, August 31, 2015	CenturyLink presents at Bank of America Merrill Lynch Media, Communications & Entertainment Conference
[55]	4-Nov-15	4:16 AM	SEC EDGAR, November 4, 2015	CenturyLink reports third quarter 2015 earnings; provides earnings guidance for the fourth quarter of 2015
[56]	5-Nov-15	5:04 PM	SEC EDGAR, November 5, 2015	CenturyLink files third quarter 2015 10-Q
[57]	7-Dec-15	1:45 PM	CenturyLink News Release, November 23, 2015	CenturyLink presents at UBS 43rd Annual Global Media and Communications Conference
[58]	6-Jan-16	12:30 PM	CenturyLink News Release, December 18, 2015	CenturyLink presents at Citi Global Internet, Media and Telecommunications Conference
[59]	10-Feb-16	4:25 AM	CenturyLink News Release, February 10, 2016	CenturyLink announces that Dean Douglas will join the company as president of sales and marketing.
[60]	10-Feb-16	4:18 AM	SEC EDGAR, February 10, 2016	CenturyLink reports fourth quarter and full-year 2015 earnings, and provides earnings guidance for the first quarter and full-year of 2016
[61]	25-Feb-16	5:39 PM	SEC EDGAR, February 25, 2016	CenturyLink files 2015 10-K.
[62]	2-Mar-16	11:45 AM	CenturyLink News Release, February 24, 2016	CenturyLink presents at Morgan Stanley Technology, Media & Telecom Conference
[63]	7-Mar-16	1:40 PM	CenturyLink News Release, February 24, 2016	CenturyLink presents at Raymond James 37th Annual Institutional Investors Conference
[64]	8-Mar-16	9:25 AM	CenturyLink News Release, February 24, 2016	CenturyLink presents at 2016 Deutsche Bank Securities 24th Annual Media, Internet & Telecom Conference
[65]	30-Mar-16	8:59 AM	CenturyLink News Release, March 30, 2016	Century Link completes the acquisition of netAura LLC

EXHIBIT 37
KEY EVENTS RELATED TO CENTURYLINK
2013 - 2017

	Date (U.S. ET)	Time Stamp (U.S. ET)	Source/Headline	Detailed Description
	[A]	[B]	[C]	[D]
[66]	4-May-16	4:18 AM	CenturyLink News Release, May 4, 2016	CenturyLink reports first quarter 2016 earnings; provides earnings guidance for the second quarter of 2016
[67]	5-May-16	11:47 AM	SEC EDGAR, May 5, 2016	CenturyLink files first quarter 2016 10-Q
[68]	29-Jun-16	7:59 AM	CenturyLink News Release, June 29, 2016	CenturyLink announces it has acquired certain strategic assets of the company formerly known as Active Broadband Networks
[69]	3-Aug-16	4:17 AM	CenturyLink News Release, August 3, 2016	CenturyLink reports second quarter 2016 earnings; provides earnings guidance for the third quarter of 2016
[70]	4-Aug-16	4:22 PM	SEC EDGAR, August 4, 3016	CenturyLink files second quarter 2016 10-Q
[71]	10-Aug-16	9:45 AM	CenturyLink News Release, July 27, 2016	CenturyLink presents at Oppenheimer 19th Annual Technology, Internet & Communications Conference
[72]	15-Sep-16	11:00 AM	CenturyLink News Release, August 31, 2016	CenturyLink presents at Bank of America Merrill Lynch 2016 Media, Communications & Entertainment Conference
[73]	21-Sep-16	11:20 AM	CenturyLink News Release, August 31, 2016	CenturyLink presents at Goldman Sachs Communacopia 2016
[74]	25-Oct-16	9:05 AM	CenturyLink News Release, October 25, 2016	Century Link announces that Erich Sanchack will join the company as senior vice president of federal sales effective Nov 1
[75]	27-Oct-16	11:15 AM	Reuters, CenturyLink nears deal to merge with Level 3 - sources, October 27, 2016	CenturyLink reportedly in advanced talks to merge with Level 3
[76]	31-Oct-16	6:30 AM	CenturyLink News Release, October 31, 2016	CenturyLink entered into agreement to acquire Level 3 Communications, Inc. from STT Crossing Ltd. And other shareholders for \$25.6 billion
[77]	31-Oct-16	6:32 AM	SEC EDGAR, October 31, 2016	CenturyLink reports third quarter 2016 earnings; provides earnings guidance for the fourth quarter of 2016
[78]	31-Oct-16	5:00 PM	CenturyLink News Release, October 30, 2016	CenturyLink and Level 3 Q3 2016 combined Earnings Call
[79]	31-Oct-16	11:38 AM	Business Insider, CenturyLink is buying Level 3 Communications for \$34 billion, October 31, 2016	CenturyLink agrees to buy Level 3 Communications for about \$34 billion in cash and stock, creating a more formidable competitor to AT&T in the market. CenturyLink CEO Glen Post will be CEO of the combined company, while Level 3 CFO Sunit Patel will be CFO.
[80]	4-Nov-16	1:58 PM	SEC EDGAR, November 4, 2016	CenturyLink files third quarter 2016 10-Q
[81]	10-Nov-16	10:30 AM	CenturyLink News Release, October 26, 2016	CenturyLink presents at Wells Fargo Securities 2016 Technology, Media and Telecom Conference
[82]	29-Nov-16	10:50 AM	CenturyLink News Release, November 18, 2016	CenturyLink presents at Bank of America Merrill Lynch 2016 Leveraged Finance Conference
[83]	5-Dec-16	10:00 AM	CenturyLink News Release, November 21, 2016	CenturyLink presents at UBS 44th Annual Global Media and Communications Conference 2016
[84]	4-Jan-17	11:45 AM	CenturyLink News Release, December 21, 2016	CenturyLink presents at Citi 2017 Global Internet, Media & Telecommunications Conference
[85]	9-Jan-17	9:00 AM	CenturyLink News Release, January 9, 2017	CenturyLink completes the acquisition of SEAL Consulting, Inc.
[86]	8-Feb-17	3:15 PM	CenturyLink News Release, February 8, 2017	CenturyLink reports fourth quarter and full-year 2016 earnings, and provides earnings guidance for the first quarter and full-year of 2017
[87]	16-Feb-17	2:04 PM	Reuters, <i>Brief- CenturyLink Inc. entered into a memorandum of understanding for settlement of lawsuit</i> , February 16, 2017	CenturyLink enters into memorandum of understanding providing for the settlement of the putative shareholder class action lawsuit
[88]	22-Feb-17	10:01 PM	SEC EDGAR, February 22, 2017	CenturyLink files 2016 10-K.
[89]	1-Mar-17	12:30 PM	CenturyLink News Release, February 22, 2017	CenturyLink presents at Morgan Stanley 2017 Technology, Media & Telecom Conference

EXHIBIT 37
KEY EVENTS RELATED TO CENTURYLINK
2013 - 2017

	Date (U.S. ET)	Time Stamp (U.S. ET)	Source/Headline	Detailed Description
	[A]	[B]	[C]	[D]
[90]	7-Mar-17	9:45 AM	CenturyLink News Release, February 22, 2017	CenturyLink presents at Deutsche Bank 25th Annual Media & Telecom Conference
[91]	16-Mar-17	4:15 PM	CenturyLink News Release, March 16, 2017	CenturyLink and Level 3 Communications today announce that shareholders of both companies overwhelmingly approved all proposals related to the companies' merger
[92]	10-Apr-17	10:38 AM	Puget Sound Business Journal, <i>Exclusive: CenturyLink Chairman William A. Owens, a Kirkland resident, to step down</i> , April 10, 2017	CenturyLink announces the retirement of William Owens as Chairman of the Board in May
[93]	3-May-17	4:18 PM	SEC EDGAR, May 3, 2017	CenturyLink reports first quarter 2017 earnings; provides earnings guidance for the second quarter of 2017
[94]	4-May-17	7:02 PM	SEC EDGAR, May 5, 2017	CenturyLink files first quarter 2017 10-Q
[95]	22-May-17	10:40 AM	CenturyLink News Release, May 15, 2017	CenturyLink presents at 45th Annual J.P. Morgan Global Technology, Media and Telecom Conference
[96]	1-Jun-17	8:00 AM	CenturyLink News Release, June 1, 2017	CenturyLink announces that upon closing of the CenturyLink - Level 3 acquisition, Jeff Storey, currently president and CEO of Level 3 Communications, Inc., will join the company as its president and COO.
[97]	16-Jun-17	1:50 PM	Bloomberg, <i>CenturyLink is Accused of Running a Wells Fargo-Like Scheme</i> , June 16, 2017	A former CenturyLink Inc. employee claims she was fired for blowing the whistle on the telecommunications company's high-pressure sales culture that left customers paying millions of dollars for accounts they didn't request, according to a lawsuit filed this week in Arizona state superior court. The company's shares fell...
[98]	16-Jun-17	2:12 PM	Bloomberg, <i>CenturyLink Shares Drop 4%; Utilities Index Little Changed</i> , June 16, 2017	(Bloomberg) -- CenturyLink Inc. fell 4.1 percent, the biggest move since May 4, compared with end-of-day price changes, while its industry group was little changed.
[99]	19-Jun-17	9:02 AM	Morgan Stanley, <i>CenturyLink Lawsuit Raises Questions but Precedents Suggest Limited Impact</i> , June 19, 2017	Telecom operators face lawsuits and regulatory actions for "cramming" extra services onto customer bills from time to time, but the ultimate settlements usually are not that material. For example, back in 2015 Verizon (\$90m) and Sprint (\$68m) agreed to settlements related to unauthorized charges on customer wireless bills in a settlement with the FCC. AT&T (\$105m) and T-Mobile (\$90m) had settled the previous year.
[100]	19-Jun-17	9:40 AM	Denver Business Journal Online, <i>CenturyLink accused of unethical sales techniques; Level 3 shares dragged down</i> , June 19, 2017	Shares in Level 3 Communication Inc. fell Friday and continued to dip early Monday after news that its merger partner is accused of engaging in fraudulent billing.
[101]	21-Jun-17	5:36 PM	Globe Newswire, <i>Pomerantz Law Firm Announces the Filing of a Class Action against CenturyLink, Inc. and Certain Officers - CTL</i> , June 21, 2017	Pomerantz LLP announces that a class action lawsuit has been filed against CenturyLink and certain of its officers. The class action, filed in U.S. District Court, Southern District of New York... is on behalf of a class consisting of investors who purchased or otherwise acquired CenturyLink securities, seeking to recover compensable damages caused by defendants' violations of the Securities Exchange Act of 1934. The Complaint alleges that throughout the Class Period, Defendants made materially false and misleading statements regarding the Company's business, operational and compliance policies. Specifically, Defendants made false and/or misleading statements and/or failed to disclose that: (i) CenturyLink's policies allowed its employees to add services or lines to accounts without customer permission, resulting in millions of dollars in unauthorized charges to CenturyLink customers; (ii) accordingly, the Company's revenues were the product of illicit conduct and unsustainable; (iii) the foregoing illicit conduct was likely to subject CenturyLink to heightened regulatory scrutiny; and (iv) as a result of the foregoing, CenturyLink's public statements were materially false and misleading at all relevant times.

EXHIBIT 37
KEY EVENTS RELATED TO CENTURYLINK
2013 - 2017

	Date (U.S. ET)	Time Stamp (U.S. ET)	Source/Headline	Detailed Description
	[A]	[B]	[C]	[D]
[102]	22-Jun-17	2:29 PM	Kessler Topaz Meltzer & Check, LLP Press Release, June 22, 2017	The law firm of Kessler Topaz Meltzer & Check, LLP announced that shareholder class action lawsuits have been filed against CenturyLink, Inc. on behalf of purchasers of the company's securities between February 27, 2014 and June 19, 2017, inclusive (class period). The shareholder class action complaints allege that the company and certain of its executive officers made false and misleading statements and/or failed to disclose material adverse facts about the company's business and compliance policies during the class period, including the following: the company's policies allowed its employees to add services or lines to accounts without customer permission, resulting in millions of dollars in unauthorized charges to CenturyLink customers; accordingly, the company's revenues were the product of illicit conduct and unsustainable; and the foregoing illicit conduct was likely to subject the company to heightened regulatory scrutiny
[103]	23-Jun-17	12:59 PM	MarketWatch, <i>The Law Offices of Howard G. Smith Announces the Filing of a Securities Class Action on Behalf of CenturyLink, Inc. Investors and Encourages Investors to Contact the Firm</i> , June 23, 2017	Law Offices of Howard G. Smith announced that a class action lawsuit has been filed on behalf of investors who purchased CenturyLink Inc. securities between August 3, 2016, and June 19, 2017, inclusive. CenturyLink investors have until August 18, 2017 to file a lead plaintiff motion
[104]	23-Jun-17	5:50 PM	MarketWatch, <i>Equity Alert: Rosen Law Firm Announces Filing of Securities Class Action Lawsuit Against Zoompass, Inc. -- ZPAS</i> , June 23, 2017	Rosen Law Firm, announced the filing of a class action lawsuit on behalf of purchasers of the securities of CenturyLink, Inc. from February 27, 2014 through June 15, 2017, inclusive.
[105]	26-Jun-17	1:47 PM	MarketWatch, <i>Investor Update: The Law Offices of Howard G. Smith Announces an Expanded Class Period in the Securities Class Action Lawsuit Pending Against CenturyLink, Inc.</i> , June 26, 2017	Law Offices of Howard G. Smith announced that a class action lawsuit has been filed on behalf of investors who purchased CenturyLink Inc. securities between March 1, 2013 and June 16, 2017, inclusive both dates. CenturyLink investors have until August 18, 2017 to file a lead plaintiff motion.
[106]	29-Jun-17	9:00 AM	MarketWatch, <i>CTL Investors Alert: Lief & Cabraser Announces Securities Class Action Against CenturyLink, Inc.</i> , June 29, 2017	The law firm of Lief & Cabraser Heimann & Bernstein, LLP announced that class action litigation has been filed on behalf of investors who purchased or otherwise acquired the securities of CenturyLink, Inc. between March 1, 2013 and June 19, 2017, inclusive.
[107]	6-Jul-17	6:24 PM	Phoenix Business Journal, <i>CenturyLink class-action lawsuit adds Arizona customers</i> , July 6, 2017	A class-action lawsuit against CenturyLink has been extended to include Arizona customers, alleging fraudulent billing practices, improper collections and the creation of fake accounts using consumer identifications.
[108]	12-Jul-17	12:52 PM	Reuters News, <i>Minnesota attorney general sues CenturyLink on billing practices</i> , July 12, 2017	NEW YORK, July 12 (Reuters) - Minnesota Attorney General Lori Swanson filed a lawsuit against cable provider CenturyLink Inc for its billing practices, sending shares down on Wednesday.
[109]	12-Jul-17	1:12 PM	Dow Jones Institutional News, <i>State Lawsuit Puts Kink in CenturyLink Deal-- Market Talk</i> , July 12, 2017	1312 ET - CenturyLink (CTL) legal troubles mount as Minnesota attorney general Lori Swanson sues the phone and internet provider, alleging in county court the company billed "higher amounts than its sales agents quoted customers" and "often..."
[110]	13-Jul-17	7:01 PM	The Wall Street Journal Online, <i>Minnesota Sues CenturyLink Over Billing Complaints: State says investigation prompted by misquoted prices for television or internet service</i> , July 12, 2017	Minnesota's attorney general accused CenturyLink Inc. of systematically overbilling customers, adding to the telecommunications provider's legal troubles as it pursues a massive corporate merger.
[111]	2-Aug-17	4:15 PM	CenturyLink News Release, August 2, 2017	CenturyLink reports second quarter 2017 earnings; provides earnings guidance for the third quarter of 2017

EXHIBIT 37
KEY EVENTS RELATED TO CENTURYLINK
2013 - 2017

	Date (U.S. ET)	Time Stamp (U.S. ET)	Source/Headline	Detailed Description
	[A]	[B]	[C]	[D]
[112]	4-Aug-17	6:29 PM	SEC EDGAR, August 4, 2017	CenturyLink files second quarter 2017 10-Q
[113]	8-Aug-17	4:45 PM	CenturyLink News Release, July 25, 2017	CenturyLink presents at Cowen and Company 3rd Annual Communications Infrastructure Summit
[114]	9-Aug-17	10:25 AM	CenturyLink News Release, July 25, 2017	CenturyLink presents at Oppenheimer 20th Annual Technology, Internet & Communications Conference
[115]	15-Aug-17	2:52 PM	MarketWatch, <i>Equity Alert: Lundin Law PC Announces Securities Class Action Lawsuit against CenturyLink, Inc. and Encourages Investors with Losses in Excess of \$100,000 to Contact the Firm</i> , August 15, 2017	Lundin Law PC announced a class action lawsuit against CenturyLink, Inc. for possible violations of federal securities laws from February 27, 2014 through June 15, 2017, inclusive. Investors who purchased or otherwise acquired CenturyLink shares during the Class Period should contact the firm prior to the August 21, 2017 lead plaintiff motion deadline.
[116]	15-Aug-17	2:54 PM	MarketWatch, <i>Holzer & Holzer Files Class Action Suit Against CenturyLink, Inc.</i> , August 15, 2017	Holzer & Holzer, LLC announces that it has filed a class action lawsuit on behalf of investors in CenturyLink, Inc. who purchased CenturyLink shares between March 1, 2013 and June 19, 2017. The case is pending in the United States District Court for the Western District of Louisiana and captioned Scott v. CenturyLink, Inc., et al., case number 17-cv-01033.
[117]	12-Sep-17	3:45 PM	CenturyLink News Release, August 31, 2017	CenturyLink presents at Goldman Sachs's 26th Annual Communacopia Conference
[118]	17-Oct-17	9:00 AM	CenturyLink News Release, October 17, 2017	CenturyLink presents at Annual NATO Information Assurance Symposium
[119]	1-Nov-17	9:15 AM	CenturyLink News Release, November 1, 2017	CenturyLink competes acquisition of Level 3 Communications, Inc. for \$25.6 billion
[120]	30-Oct-17	4:33 PM	The Denver Post, <i>CenturyLink's Purchase of Level 3 to Close November 1</i> , October 31, 2017	CenturyLink announces that Glen Post stepped down from the role of President of CenturyLink... Mr. Post continues to serve as company CEO and a director.
[121]	31-Oct-17		Moody's News Release, October 31, 2017	Moody's downgrades CenturyLink to Ba3; outlook negative
[122]	8-Nov-17	3:16 PM	CenturyLink News Release, November 8, 2017	CenturyLink reports third quarter 2017 earnings; provides earnings guidance for the fourth quarter of 2017
[123]	9-Nov-17	9:51 AM	SEC EDGAR, November 9, 2017	CenturyLink files third quarter 2017 10-Q
[124]	4-Dec-17	10:15 AM	CenturyLink News Release, November 28, 2017	CenturyLink presents at UBS 45th Annual Global Media and Communications Conference
[125]	5-Dec-17	3:57 PM	MarketWatch, Glancy Prongay & Murray LLP Press Release, December 5, 2017	Glancy Prongay & Murray LLP announced that a class action lawsuit has been filed on behalf of bondholders that acquired 7.60% Senior Notes, Series P, due 2039, of CenturyLink, Inc. bonds between March 1, 2013 and June 19, 2017, inclusive.
[126]	6-Dec-17	2:00 AM	Business Wire, <i>CTL Investor Alert: The Law Offices of Vincent Wong Notifies Investors of a Class Action Involving CenturyLink, Inc. Senior Notes and a Lead Plaintiff Deadline of December 26, 2017</i> , December 6, 2017	The Law Offices of Vincent Wong announced that a class action lawsuit has been commenced in the United States District Court for the Southern District of New York on behalf of investors who purchased CenturyLink, Inc. 7.60% Senior Notes, Series P, due 2039, between March 1, 2013 and June 19, 2017.
[127]	7-Dec-17	7:30 AM	CenturyLink News Release, December 7, 2017	CenturyLink announces conclusion of Special Committee investigation... The investigation did not reveal evidence to conclude that any member of the Company's management team engaged in fraud or wrongdoing. Company management did not condone or encourage cramming, and the evidence did not show that cramming was common at the Company...
[128]	14-Feb-18	4:26 AM	CenturyLink News Release, February 14, 2018	CenturyLink reports fourth quarter and full-year 2017 results

EXHIBIT 37
KEY EVENTS RELATED TO CENTURYLINK
2013 - 2017

Date (U.S. ET)	Time Stamp (U.S. ET)	Source/Headline	Detailed Description
[A]	[B]	[C]	[D]

Notes and Sources:

- [1] Events are taken from Capital IQ's CenturyLink Corporate Timeline from 2013 - 2017, other than additional news stories added from the curative disclosure dates (June 16 & 19, July 12, 2017), which are taken from Exhibits 30B, 31B, and 32B, and the earnings announcement for full-year 2017 results on February 14, 2018.
- [2] All Detailed Descriptions are direct quotes from their associated sources other than earnings releases, SEC filings, and company presentations.
- [3] All Time Stamps are based on available information. If no time stamp is associated with the Source/Headline, Time Stamps only include a date.
- [4] Event dates and time stamps indicate the date/time that the media release was published, except for CenturyLink presentations, which indicate when the presentation took place.

Key:

Earnings or financial announcement
10-Q or 10-K
Executive change
Lawsuit or other news story
Merger or acquisition
Company presentation

Exhibit 2

UNITED STATES DISTRICT COURT

DISTRICT OF MINNESOTA

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IN RE: CENTURYLINK SALES MDL No. 17-2795
PRACTICES AND SECURITIES (MJD/KMM)
LITIGATION

This Document Relates to:

Civil File No. 18-296

(MJD/KMM)
-----x

VIDEOTAPED DEPOSITION OF MICHAEL L. HARTZMARK

DATE: Tuesday, February 25, 2020

TIME: 9:55 a.m.

LOCATION: Cooley LLP

3175 Hanover Street

Palo Alto, California

Reported By: Lynne Ledanois, CSR 6811

Job No. 3999961

PAGES 1 - 170

Page 1

1 AFTERNOON SESSION 12:35

2 VIDEOGRAPHER: On record at 1:32 p.m.

3 BY MR. GIBBS:

4 Q Welcome back.

5 A Thank you. 01:35

6 Q Before the lunch break, you and I were

7 talking about statistics for a bit, and I was

8 trying to get you to agree with me that there is

9 a scientifically-accepted level of statistical

10 significance or certainty, and I don't think I 01:35

11 got there.

12 So let me just make sure I'm

13 understanding your testimony correctly.

14 If I were to say that the

15 scientifically-accepted level of certainty as a 01:35

16 matter of statistics is a statistical

17 significance of the 95 percent level, would you

18 agree or disagree with that statement?

19 A I'm confused by the concept of

20 "scientific degree of certainty." 01:35

21 Q Scientifically-accepted level of

22 certainty.

23 A The nature of statistical significance

24 is there is a no hypothesis. The abnormal

25 return is zero. 01:36

1 And the scientific statistical 01:36
2 significance is associated with rejecting the
3 null hypothesis; the abnormal return is zero.

4 You can reject it at 5 percent level,
5 reject it at a 6.12 percent level. 01:36

6 But in terms of certainty, there's --
7 the statistics, there is no such thing as
8 certainty. It would be 100 percent.

9 Q So, in your view, there is no such
10 thing as a scientifically-accepted level of 01:36
11 certainty in this context?

12 A Scientific level of certainty?

13 Q That's not what I said. I said
14 scientifically-accepted level of certainty.

15 A No, I'm not familiar with that 01:36
16 concept.

17 Q Okay. Then can you help me understand
18 why you wrote in Appendix D to your report,
19 quote [as read]: I used the
20 scientifically-accepted level of certainty and 01:37
21 declare statistical significance at a 95 percent
22 level, close quote.

23 A I don't have that in front of me.

24 Q We'll get it in front of you. It's
25 been marked as Exhibit 4. 01:37

1 (Deposition Exhibit 4 was marked for 01:37
2 identification.)

3 BY MR. GIBBS:

4 Q It's in Paragraph 9 at Page D5.

5 A Where? 01:37

6 Q Paragraph 9, second-to-last sentence
7 of the paragraph.

8 A I used a scientifically-accepted level
9 of certainty and declare statistical
10 significance at a 95 percent level. Okay. 01:38

11 Your question was?

12 Q Is the statement true or false?

13 A The -- yes, as it relates to 95
14 percent confidence level, yes.

15 Q Okay. And so the 95 percent 01:38
16 confidence level is the scientifically-accepted
17 level of certainty in this context; is that
18 right?

19 MR. BLATCHLEY: Objection, form.

20 THE WITNESS: For a -- yes, if you 01:38
21 declare statistical significance at the 95
22 percent level, if you use the
23 scientifically-accepted level of certainty
24 of 5 percent.

25 Q So that statement is true? 01:39

Page 111

1 A Yes. 01:39

2 Q And is it also true that the one-day
3 price decline that you observed on June 19th,
4 2017 for CenturyLink's stock does not meet the
5 95 percent level of confidence? 01:39

6 A That's correct.

7 Q Actually, you can keep Appendix D in
8 front of you.

9 I want to ask you a little bit about
10 your use of an industry index for purposes of 01:39
11 your regression analysis.

12 Do you understand what I'm referring
13 to?

14 A If you're referring to this variable
15 industry, all caps, subscript T, yes. 01:39

16 Q I am.

17 A Yes.

18 Q Can you explain for me briefly what
19 role the industry index plays in the regression
20 analysis that you did to support your opinion? 01:40

21 A The industry index would -- is a
22 variable that would explain, all else constant,
23 the variation and movements of the returns of
24 CenturyLink's stock associated with the
25 industry. 01:40

1 MR. BLATCHLEY: Objection to form and 02:11
2 misstates the report.

3 THE WITNESS: As I understand the
4 allegations, there were misrepresentations
5 and omissions made that caused there to be 02:12
6 inflation in the stock over the class
7 period.

8 And that inflation caused harm to the
9 investors, and that harm is what the
10 out-of-pocket damages methodology 02:12
11 calculates.

12 BY MR. GIBBS:

13 Q How do you know it can be done in this
14 case, not just theoretically, but in this case?

15 A So you're saying how -- if I 02:12
16 understand you correctly, how can the loss
17 caused by the fraud be calculated?

18 Q In this case, yes, on a classwide
19 basis.

20 A That's an obvious question of loss 02:12
21 causation. I have not been asked to do a loss
22 causation analysis.

23 It's an obvious question as it relates
24 to the loss caused by the fraud which is going
25 to be measured by what's called an inflation 02:12

1 A Again -- 02:14

2 MR. BLATCHLEY: Asked and answered.

3 THE WITNESS: I haven't done a loss

4 causation report.

5 BY MR. GIBBS: 02:14

6 Q So you don't know then today whether

7 the loss in this case could be measured by a

8 damages ribbon; correct?

9 MR. BLATCHLEY: Objection.

10 THE WITNESS: I've not calculated a 02:14

11 damages ribbon.

12 BY MR. GIBBS:

13 Q That's not my question.

14 A I told you, I'm not here to opine on

15 the level of damages. I'm not here to opine on 02:14

16 the inflation ribbon. I'm here to opine on a

17 common damages methodology.

18 What I can say is that whatever that

19 inflation ribbon is, even if in your case you

20 want it to be zero, the damages methodology 02:14

21 still applies.

22 I can look at the inflation at the

23 time of purchase and inflation -- it's no

24 different, like I said, of a formula for the

25 slope of a line. I can tell you what the 02:14

1 [As read]: Calculating the actual 02:17
2 inputs -- which, again, I've not been asked to
3 do at this point -- into the method by parsing
4 and scaling abnormal returns, if it were
5 required, requires an analysis of loss 02:17
6 causation.

7 But the Supreme Court's Halliburton 1
8 opinion determined that loss causation is a
9 common issue that need not be analyzed at the
10 class certification stage. 02:17

11 So, as I said before, whatever the
12 input is with the inflation ribbon when the loss
13 causation analysis is completed will be applied
14 classwide, so that investor -- individual
15 investor damages are calculated using the common 02:17
16 methodology.

17 Q Okay. So other than your use of the
18 word "CenturyLink," as you were reading through
19 Paragraph 189, everything you just read to me
20 from your report, you could say the same about 02:18
21 every single securities class action that's ever
22 been filed; correct?

23 MR. BLATCHLEY: Objection, form.

24 THE WITNESS: I can't answer that
25 question. 02:18

1 I've not read every single -- I don't 02:18
2 know what the allegations are.

3 I know that in this particular case,
4 where the allegations relate to the
5 inflation associated with this particular 02:18
6 matter, that whatever the inputs are into
7 the inflation ribbon will be applied
8 classwide.

9 BY MR. GIBBS:

10 Q You're again just assuming that the 02:18
11 inputs can be derived in a way that's meaningful
12 and reliable.

13 You just keep skipping over that step;
14 right?

15 A No. 02:18

16 Q Excuse me. Let me finish.

17 Set aside every case that's ever been
18 filed, other than a single reference to the word
19 "CenturyLink," show me what part of the language
20 from your report that you just read to me 02:18
21 reflects an analysis of anything that is
22 specific to this case as distinguished from any
23 other securities case?

24 MR. BLATCHLEY: Objection to form.

25 THE WITNESS: What is specific to this 02:19

1 case is a loss causation analysis; correct? 02:19
2 And as I said before and I say right
3 here, you might need to parse.
4 Parse means to disaggregate. Parse
5 means to disaggregate the amount of the 02:19
6 alleged corrective -- the price reaction to
7 the alleged corrective disclosure to account
8 for the loss caused by the fraud.
9 Understand. I'll underline the word
10 "caused by the fraud" and separate that from 02:19
11 a loss caused -- I'll underline that
12 again -- from the nonfraud. That is an
13 obvious loss causation analysis.
14 Second, I say here you might have to
15 scale, okay, which would mean the inflation 02:19
16 ribbon would vary over time.
17 What does that mean?
18 That means that the loss caused -- and
19 I'll underline it again -- by the fraud and
20 the harm to investor might vary over time. 02:20
21 That is part of a loss causation report.
22 It is my understanding that -- and I
23 read from the Supreme Court in the
24 Halliburton 1 opinion and from my discussion
25 with counsel, that a loss causation analysis 02:20

1 comes at a later stage. 02:20

2 I've not been asked to engage in a
3 loss causation analysis. I've only been
4 asked to opine on whether there is a common
5 damages methodology. 02:20

6 And if it's the case -- and you used
7 the word "reliable."

8 If it's the case that I at a loss
9 causation analysis were to present an
10 appropriate parsing and scaling approach 02:20
11 that the finder of fact determined was not
12 reliable. Okay.

13 Or if we take your example where the
14 defendants are found not guilty or not
15 liable, again, my comment damages 02:20
16 methodology still is applicable because you
17 would end up putting in the amount of zero
18 and still be using -- apply it classwide.

19 And the issue is, is there a common
20 damages methodology? And the answer is yes. 02:21

21 BY MR. GIBBS:

22 Q So you've just described parsing and
23 scaling that you would need to do to start with
24 your loss causation analysis and end up with the
25 inputs to your inflation ribbon; right? 02:21

1 work. 02:22

2 My question to you is: How do you

3 know it can be done in this case?

4 What work have you done to get

5 comfortable that that parsing and scaling is 02:22

6 possible here --

7 MR. BLATCHLEY: Objection, asked and

8 answered.

9 BY MR. GIBBS:

10 Q -- in this case? 02:22

11 MR. BLATCHLEY: Asked and answered.

12 Objection.

13 THE WITNESS: Again, what I've said is

14 that it is -- whatever that input is will be

15 applied classwide. 02:22

16 BY MR. GIBBS:

17 Q You're skipping over the work that's

18 necessary to get to the input.

19 I'm asking you: Have you done any

20 work to get yourself comfortable that whatever 02:22

21 parsing and scaling may need to be done as part

22 of a loss causation analysis to identify an

23 inflation ribbon is possible in this case?

24 MR. BLATCHLEY: Objection. Same

25 reason. 02:22

1 THE WITNESS: You know, I haven't 02:23
2 calculated the inputs. I have not
3 determined the techniques that would be used
4 to calculate the inputs.

5 But I can say whatever the inputs are, 02:23
6 they would be applied classwide, and you
7 would look at the inflation at the time of
8 purchase and the time of sale. It's very
9 straightforward.

10 BY MR. GIBBS: 02:23

11 Q You're not answering my question, with
12 all due respect.

13 So I started by asking you: Are you
14 telling me that anytime they prove loss
15 causation, they, the generic plaintiffs, you can 02:23
16 always calculate an inflation ribbon?

17 And you said, whoa, I can't say
18 something so broad.

19 Where is the limiting principle?
20 Where is the case where they can prove loss 02:23
21 causation, but you can't reliably parse or scale
22 as needed to calculate an inflation ribbon?

23 A I'll say it again.

24 Assuming that loss causation is
25 proven, that CenturyLink is demonstrated to be 02:23

1 I haven't done a loss causation 02:29
2 analysis.

3 I've been asked to do two things.

4 One, to determine whether the
5 CenturyLink stock trades in an open, 02:29
6 well-developed and efficient market.

7 My opinion is that the Century stock
8 and the 7.6 percent note traded in open,
9 well-developed and efficient markets.

10 And, two, whether the out-of-pocket 02:29
11 damages methodology would apply if, after a
12 loss causation analysis is completed, there
13 are inputs that are calculated that could be
14 applied classwide.

15 BY MR. GIBBS: 02:29

16 Q I can absolutely assure you I did not
17 miss the fact that you haven't conducted a loss
18 causation analysis. So take that off the table.

19 Let me ask you a slightly different
20 question. 02:29

21 You keep saying if it's determined,
22 for example, that the June 16th disclosure is a
23 corrective disclosure, you would be able to
24 calculate some amount by which the price has
25 been reduced by the disclosure of a fraud. 02:30

1 What if the June 16th disclosure is 02:30
2 exaggerated? What if it's nowhere near as bad
3 as that disclosure suggested?

4 How would you go about figuring out
5 how much of the price reaction is fraud-related 02:30
6 and how much is not fraud-related?

7 MR. BLATCHLEY: Objection, form.

8 THE WITNESS: To the extent that
9 you -- that it's proven to the court that
10 that's an overreaction. 02:30

11 BY MR. GIBBS:

12 Q Yes.

13 A Okay. And you examine some other
14 component that says, for example, that it's
15 reacted two times as much, then you would take 02:30
16 the 2.4 percent decline and apply it classwide.

17 Q How would you figure out that it's
18 the -- how would you figure out that it's two
19 times? That's my question. I'm not asking how
20 to divide 4.82. 02:31

21 I'm asking: If it's determined it's
22 an overreaction of some kind because whatever
23 was going on was not actually a Wells Fargo-like
24 scheme, it didn't affect millions of customers,
25 and it didn't inflate prior financial results by 02:31

1 millions of dollars, but, instead, is low-level, 02:31
2 baseline, typical consumer issues that every
3 large consumer company has, how would you figure
4 out to what extent the price reaction is
5 fraud-related and to what extent is it an 02:31
6 overreaction?

7 What method would you use to do that?

8 A I would use common methods that are
9 used in a loss causation report.

10 Q Like what? 02:31

11 A I've not done a loss causation report.

12 Like what? I would examine possibly
13 front-end movements. Or you might examine
14 further back-end movements.

15 But I've got to do a loss causation 02:32
16 analysis. I've not been asked to do a loss
17 causation analysis.

18 The point again, you keep saying it
19 and you keep asking the same question, you're
20 concerned that I have responded 13 times with 02:32
21 the same answer.

22 Whatever that input is will be put
23 into the inflation ribbon and applied classwide
24 so that the common damages methodology can be
25 applied to calculate investor harm. 02:32

1 Q So you're telling the court, as long 02:32
2 as I do a loss causation analysis, I will
3 necessarily be able to calculate damages on a
4 classwide basis?

5 MR. BLATCHLEY: Objection, misstates. 02:32
6 BY MR. GIBBS:

7 Q Is that your testimony?

8 A My testimony is that I -- I -- it's my
9 opinion I'll be able to calculate damages.

10 And it's my opinion as well that if 02:32
11 the court were to determine that calculation was
12 not reliable, that the court could determine
13 that, and determine that, okay, it's not
14 reliable for June 16th; therefore, it's zero.

15 You would take that zero and put it 02:33
16 into the common damages methodology and
17 calculate damage for each individual investor
18 using the same formula.

19 MR. GIBBS: All right. I think we're
20 at a good point for a break. 02:33

21 VIDEOGRAPHER: Going off record at
22 2:30 p.m.

23 (Recess Taken.)

24 VIDEOGRAPHER: On record at 2:42 p.m.

25 BY MR. GIBBS: 02:45

1 Q Okay. Before the break, I was asking 02:45
2 you generally about the subject of parsing out
3 fraud-related from nonfraud-related price
4 movements in the context of a loss causation
5 analysis. 02:45

6 What I didn't ask you about is what I
7 think you referred to as "scaling," which I
8 understood you to use to refer to the concept of
9 inflation that changes over the course of the
10 class period. 02:45

11 First of all, did I understand you
12 correctly?

13 A I didn't hear the -- changes -- what
14 was that?

15 Q In the inflation over the course of a 02:46
16 class period.

17 A Over the course of the class period?

18 Q Yes. First of all, am I using
19 "scaling" correctly in that contexts?

20 A Yes, it would be the harm caused by 02:46
21 the fraud would vary over the class period, if
22 it did.

23 Q Okay. And so I just want to get a
24 sense of how one goes about doing that.

25 I know you haven't done it here. I 02:46

1 So to the extent that you're asking 02:49
2 this question about how cramming might have
3 varied over the class period, that would be
4 something -- and that's why, at least in my
5 experience, it goes to the loss causation side. 02:50

6 Because those are -- you know, you
7 would need to know what was actually going on to
8 come up with the inputs into the inflation
9 ribbon.

10 Q I'm really just looking for a yes or 02:50
11 no answer.

12 You've told me that you have assumed
13 that the facts alleged in the complaints are
14 true.

15 Making that assumption, do you have a 02:50
16 view as to whether or not the fraud-related
17 inflation in this case, assuming plaintiffs
18 prove all the facts alleged in their complaint,
19 remain constant over the class period or varied
20 over the class period? Do you know one way or 02:50
21 the other?

22 MR. BLATCHLEY: Objection.

23 THE WITNESS: As I understand that, I
24 have not examined whether the losses caused
25 by the fraud varied or not over the class 02:50

1 period because by obvious terminology, that 02:50
2 is loss causation, and I've not done any
3 analysis of loss causation.

4 BY MR. GIBBS:

5 Q If it turns out to be the case that 02:51
6 the level of inflation has varied over the class
7 period, can you tell me right now how you would
8 go about scaling in order to properly account
9 for changes in the level of inflation over the
10 course of the class period? 02:51

11 A So you're asking can I tell you right
12 now how much of the variation in some
13 hypothetical level of inflation was caused by
14 the fraud, and if that varied over time?

15 Q No, that -- 02:51

16 A That's actually what your question is.

17 Q Actually, it's not.

18 Do you want to read back the
19 question --

20 A Sure. 02:51

21 Q -- or do you want me to just reask it
22 again?

23 MR. GIBBS: Read back the question,
24 please.

25 THE WITNESS: Either way. 02:51

1 A I'm answering your question. 02:53

2 Q No, you're not answering my question.

3 The question is: Is it true that you

4 cannot tell me right now how you would do it?

5 And I keep getting filibustering, and 02:54

6 I keep getting is, what I can tell you is this

7 and what I can tell you is that.

8 I'm asking you whether, sitting here

9 today, if you assumed inflation changed over the

10 class period, even though plaintiffs have proven 02:54

11 up all the facts alleged in their complaint, can

12 you describe for me the methodology you would

13 use to calculate changes in inflation over the

14 class period?

15 The answer is clearly no, but for some 02:54

16 reason you just won't say no.

17 MR. BLATCHLEY: Objection to the

18 question.

19 THE WITNESS: I cannot tell you the

20 technique that would be used to scale. I've 02:54

21 told you that ten times.

22 The technique used to scale, I haven't

23 done that, because that's not done until

24 loss causation analysis.

25 What I can tell you is that whatever 02:54

1 that technique is and whatever that input is 02:54
2 will be applied classwide.

3 As I sit here today, I have not done a
4 loss causation analysis. So I have not
5 scaled nor have I parsed. 02:54

6 BY MR. GIBBS:

7 Q If you want to -- so by my count,
8 that's the first time you actually said
9 something as clear as I cannot tell you the
10 technique that would be used to scale. 02:55

11 If you would to scroll through and
12 show me the other place where you said that ten
13 times, I'm interested in hearing it.

14 MR. BLATCHLEY: Objection, misstates
15 testimony. 02:55

16 He's explained so many times what he's
17 done and what his understanding is.

18 BY MR. GIBBS:

19 Q Do you want to scroll through or do
20 you want to just stand on your answers? 02:55

21 A Read back my answer. I don't know.

22 MR. GIBBS: Okay. Read back his
23 answer.

24 (Record Read.)

25 THE WITNESS: I stand by that. 02:56

Exhibit 3

**UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA**

**IN RE: CENTURYLINK SALES
PRACTICES AND SECURITIES
LITIGATION**

This Document Relates to:
Civil File No. 18-296 (MJD / KMM)

MDL No. 17-2795 (MJD/KMM)

**PLAINTIFFS' RESPONSES AND
OBJECTIONS TO DEFENDANTS'
SECOND SET OF
INTERROGATORIES**

In accordance with Rules 26 and 34 of the Federal Rules of Civil Procedure, Lead Plaintiff State of Oregon by and through the Oregon State Treasurer and the Oregon Public Employees Retirement Board, on behalf of the Oregon Public Employee Retirement Fund (“Oregon”), and Named Plaintiff Fernando Alberto Vildosola (“Vildosola,” and collectively with Oregon, “Plaintiffs”), by and through their attorneys, hereby respond and object (the “Responses”) to the Second Set of Interrogatories of Defendants CenturyLink, Inc., Glen F. Post, III, R. Stewart Ewing, Jr., David D. Cole, Karen Puckett, Dean J. Douglas, and G. Clay Bailey (collectively, “Defendants”).

Plaintiffs’ Responses are made for the sole purpose of this action. Plaintiffs reserve the right to supplement, modify, or amend these Responses in accordance with the Federal Rules of Civil Procedure and the Local Rules of the United States District Court for the District of Minnesota. Plaintiffs state that they are willing to meet and confer in good faith with Defendants regarding the Interrogatories and Responses to resolve any matters in dispute.

Plaintiffs are providing these Responses without waiver of or prejudice to their right at any later time to raise objections as to: (a) the competence, relevance, materiality, privilege, or admissibility of (i) the Interrogatories or any part thereof, (ii) statements made in these Responses or any part thereof, or (iii) any information called for by or provided in response to these Interrogatories; or (b) any other demand for discovery whether or not involving or relating to the matters raised in the Interrogatories or any information provided in response to the Interrogatories. No admissions of any kind are intended by these Responses.

GENERAL OBJECTIONS

In addition to and including the above reservation of rights, Plaintiffs generally object to the Interrogatories on the following grounds, each of which is expressly incorporated by reference in the Responses to the individual interrogatories below. The Responses set forth herein are subject to – and without waiver of – any of these General Objections:

1. Plaintiffs object to the Interrogatories, including the Definitions and Instructions set forth therein, to the extent that they (a) seek to impose on Plaintiffs obligations that are not imposed by law, or are otherwise inconsistent with the Federal Rules of Civil Procedure or the Local Civil Rules; (b) are vague or ambiguous; (c) seek unreasonably duplicative responses; (d) are overbroad in terms of scope or duration; (e) are unduly burdensome or oppressive in that they would require a search for information or documents that are of little or no benefit with respect to the issues or controversies in this action, so that the value of such information or documents would be far outweighed by the

burden of obtaining them; and/or (f) seek information that is not reasonably calculated to lead to the discovery of admissible evidence, is not relevant to any claim or defense of any party, or is immaterial.

2. Plaintiffs object to the Interrogatories, including the Definitions and Instructions set forth therein, to the extent that they seek or purport to require the disclosure of non-discoverable confidential or proprietary information, information protected by the attorney-client privilege, the attorney work product doctrine, the joint prosecution or common interest privilege or rules, or any other applicable privilege, protection or immunity. To the extent Plaintiffs may provide any information in response to the Interrogatories, Plaintiffs do not waive any privileges, protections or immunities.

3. Plaintiffs object to the Interrogatories, including the Definitions and Instructions set forth therein, to the extent that they seek information or documents that are not within Plaintiffs' possession, custody or control.

4. Plaintiffs object to the Interrogatories, including the Definitions and Instructions set forth therein, to the extent that they purport to define terms and/or seek to characterize evidence. To the extent that Plaintiffs expressly or impliedly adopts any defined term set forth in the Interrogatories, such adoption is specifically limited to the Responses and does not constitute an admission of fact or law.

5. Plaintiffs object to the Interrogatories, including the Definitions and Instructions set forth therein, to the extent that they call for a legal conclusion and/or opinion, including any explanation, advice, or rationale based upon legal analysis.

6. No objection, limitation, response, or lack thereof made in these Responses is intended as an admission by Plaintiffs as to the existence or non-existence of information responsive to the Interrogatories.

7. By responding to the Interrogatories, Plaintiffs do not concede the relevancy, materiality, or admissibility of evidence of any of the information sought.

8. The information provided herein is based on Plaintiffs' present knowledge, information, and belief. Plaintiffs reserve the right to supplement, amend, or correct all or any parts of any Responses provided herein. Plaintiffs further reserve the right to object to the admissibility of all or any part of their Responses provided herein and any information contained herein.

9. Plaintiffs' objections are provided without prejudice to their right to produce evidence of any subsequently discovered facts or any facts that they may later recall, and with express rights to revise, correct, supplement or clarify any objections or responses set forth herein at a later time.

10. These Responses to the Interrogatories are made without waiving (and expressly reserving) Plaintiffs' rights (a) to object on any ground to the use of the information provided in the Responses in any stage or proceeding in this action or any other action; and (b) to object on any ground to other information that involves or relates to the subject matter of the Interrogatories.

11. By making a specific objection to the Interrogatories, Plaintiffs do not imply that the specific objection is not applicable in response to any other particular

Interrogatories previously or subsequently served by Defendants, or that the General Objections are not applicable to such request.

OBJECTIONS TO INSTRUCTIONS AND DEFINITIONS

12. Plaintiffs object to Definition No. 6 (“Plaintiffs,” “You,” or “Your”) to the extent the definition purports to include any division or agency other than Oregon as defined in the Complaint. Plaintiffs will interpret the term “State of Oregon” to mean Oregon as defined in the Complaint.

SPECIFIC RESPONSES AND OBJECTIONS TO INTERROGATORIES

INTERROGATORY NO. 3:

Identify all current and former employees and agents of the State of Oregon (including but not limited to employees and agents of the Oregon State Treasury, the Oregon Public Employees Retirement Board, the Oregon Public Employees Retirement Fund, and the Oregon Investment Council) who evaluated or conducted any analysis of CenturyLink securities or transacted or made decisions to transact in CenturyLink securities during the Class Period, and for each, identify his or her dates of employment by the State of Oregon and work title(s) during the Class Period.

RESPONSE:

Plaintiffs object to this Interrogatory on the grounds that it is overly broad, unduly burdensome, and not proportionate to the needs of the case to the extent it seeks information: (i) that is unrelated to this case; (ii) regarding CenturyLink securities other than those at issue in this action; (iii) regarding transactions in CenturyLink securities other than transactions by or on behalf of Oregon; or (iv) related to individuals’ evaluations or

transactions not on behalf of Oregon. Plaintiffs further object to this Interrogatory to the extent that it seeks information not relevant to the claim or defense of any party, including, without limitation, insofar as it seeks information regarding transactions in CenturyLink securities by or on behalf of any agency, subdivision, fund, or other entity other than Oregon Public Employee Retirement Fund. Plaintiffs further object to this Interrogatory on the grounds that the terms “evaluated” and “conducted any analysis” are vague, ambiguous, and/or overly broad. Plaintiffs further object to this Interrogatory to the extent it seeks discovery regarding absent class members insofar as it seeks information regarding transactions in CenturyLink common stock or the 7.6% Bond by or on behalf of any agency, subdivision, fund, or other entity other than Oregon Public Employee Retirement Fund, on the grounds that such discovery is impermissible.

Subject to the foregoing and General Objections, Plaintiffs identify the following employees of Oregon with responsibility for the internally-managed portfolios of the Oregon Public Employees Retirement Fund in which transactions in CenturyLink securities occurred during the Class Period:

	Name, Title, Dates of Employment
1	Michael Viteri Senior Investment Officer (June 16, 2008 to May 31, 2011) Senior Public Equity Investment Officer (June 1, 2011 to present)
2	Karl Cheng Investment Officer (August 29, 2011 to August 31, 2017)
3	Paola Nealon Investment Officer (March 17, 2014 to August 25, 2017)

	Name, Title, Dates of Employment
4	William Hiles Investment Analyst (June 29, 2016 to July 7, 2019)
5	Ben Mahon Investment Officer (June 2, 2008 to December 31, 2015)

INTERROGATORY NO. 4:

Identify each and every agency and subdivision of the State of Oregon, and any fund under its management or control, that transacted in CenturyLink securities during the Class Period, and for each, identify all transactions in CenturyLink securities during the Class Period.

RESPONSE:

Plaintiffs object to this Interrogatory on the grounds that it is overly broad, unduly burdensome, and not proportionate to the needs of the case to the extent it seeks information: (i) that is unrelated to this case; (ii) regarding CenturyLink securities other than those at issue in this action; or (iii) regarding transactions in CenturyLink securities other than transactions by or on behalf of Oregon. Plaintiffs further object to this Interrogatory to the extent that it seeks information not relevant to the claim or defense of any party, including, without limitation, insofar as it seeks information regarding transactions in CenturyLink securities by or on behalf of any agency, subdivision, fund, or other entity other than Oregon Public Employee Retirement Fund. Plaintiffs further object to this Interrogatory to the extent it seeks discovery regarding absent class members insofar as it seeks information regarding transactions in CenturyLink common stock or the 7.6%

Bond by or on behalf of any agency, subdivision, fund, or other entity other than Oregon Public Employee Retirement Fund, on the grounds that such discovery is impermissible.

Subject to the foregoing and General Objections, Plaintiffs state that information responsive to this Interrogatory is contained in documents Plaintiffs produced in response to Defendants' Document Requests, and refers Defendants to such documents as permitted by Rule 33(d) of the Federal Rules, including Oregon's trading records regarding CenturyLink common stock, which Plaintiffs previously produced at PL_0005122 and PL_0005123.

INTERROGATORY NO. 5:

Describe in detail all material omissions of fact that You claim give rise to a presumption of reliance under *Affiliated Ute Citizens of Utah v. United States*, 406 U.S. 128 (1972), and for each alleged omission, identify the source of the speaker's alleged duty to disclose.

RESPONSE:

Plaintiffs object to this Interrogatory to the extent it seeks information protected by the attorney-client privilege, the work-product doctrine, or any other legally recognized privilege, protection, immunity, or exemption from discovery. Plaintiffs further object to this Interrogatory on the grounds that it is a premature contention-style interrogatory. Discovery is ongoing in this matter. Fact discovery does not close until September 21, 2020. Scheduling and Case Management Order, Dkt. No. 197, at 2. The parties agreed that they would "not serve any contention-style interrogatories prior to 60 days before the end of fact discovery unless ordered by the Court." Joint Report Pursuant to F.R.C.P. 26(f)

and L.R. 16.2, Dkt. No. 183, at 15. This Interrogatory is premature and Plaintiffs do not presently intend to respond to this Interrogatory unless and until it is re-served at the appropriate time.

Subject to the foregoing and General Objections, Plaintiffs respond as follows: Plaintiffs stand on their objections, and refer Defendants to the Complaint and the Court's order denying Defendants' Motion to Dismiss (*In re CenturyLink Sales Practices & Sec. Litig.*, 403 F. Supp. 3d 712 (D. Minn. 2019)). Nonetheless, Plaintiffs are willing to meet and confer regarding this Interrogatory.

INTERROGATORY NO. 6:

Identify any agreement that You have entered concerning the funding of attorneys' fees and expenses incurred in connection with this Action or incentive or success payments related to Your current or future role in this Action, and describe all terms and conditions of any such agreement(s).

RESPONSE:

Plaintiffs object to this Interrogatory to the extent it seeks information protected by the attorney-client privilege, the work-product doctrine, or any other legally recognized privilege, protection, immunity, or exemption from discovery. Plaintiffs further object to this Interrogatory on the grounds that the phrase "concerning the funding of attorneys' fees and expenses incurred in connection with this Action or incentive or success payments related to Your current or future role in this Action" is vague, ambiguous, and/or overly broad.

Subject to the foregoing and General Objections, Plaintiffs state that Oregon selected Bernstein Litowitz Berger & Grossman LLP and Stoll Stoll Berne Lokting & Shlachter P.C. to represent Oregon and the Class as co-Lead Counsel in this Action. The terms of those retentions are privileged. Plaintiffs have not entered into any litigation funding agreement in connection with this Action. Plaintiffs further state that they have not entered into any agreement concerning any incentive or success payments related to their current or future role in this Action, and will not accept any payment for serving as a representative party on behalf of the Class beyond Plaintiffs' respective pro rata shares of any recovery, except such reasonable costs and expenses directly relating to the representation of the Class, as ordered or approved by the Court.

INTERROGATORY NO. 7:

Identify all questions of law and fact that You contend are common to the class You propose the Court certify, and set forth in detail how each issue can be resolved on a class-wide basis.

RESPONSE:

Plaintiffs object to this Interrogatory to the extent it seeks information protected by the attorney-client privilege, the work-product doctrine, or any other legally recognized privilege, protection, immunity, or exemption from discovery. Plaintiffs further object to this interrogatory on the ground that it is unduly burdensome and disproportionate to the needs of the case, and is otherwise outside of the scope of Rule 33.

Plaintiffs further object to this Interrogatory on the grounds that it is a premature contention-style interrogatory. Discovery is ongoing in this matter. Fact discovery does

not close until September 21, 2020. Scheduling and Case Management Order, Dkt. No. 197, at 2. The parties agreed that they would “not serve any contention-style interrogatories prior to 60 days before the end of fact discovery unless ordered by the Court.” Joint Report Pursuant to F.R.C.P. 26(f) and L.R. 16.2, Dkt. No. 183, at 15. This Interrogatory is premature and Plaintiffs do not presently intend to respond to this Interrogatory unless and until it is re-served at the appropriate time.

Subject to the foregoing and General Objections, Plaintiffs respond as follows: Plaintiffs refer Defendants to their Complaint and Motion for Class Certification and supporting papers (ECF Nos. 188-196). Plaintiffs otherwise stand on their objections. Nonetheless, Plaintiffs are willing to meet and confer regarding this Interrogatory.

INTERROGATORY NO. 8:

Identify and describe in detail (including by providing supporting calculations) all damages You allegedly suffered as a result of the material misstatements and omissions alleged in the Complaint.

RESPONSE:

Plaintiffs object to this Interrogatory to the extent it seeks information protected by the attorney-client privilege, the work-product doctrine, or any other legally recognized privilege, protection, immunity, or exemption from discovery. Plaintiffs further object to this Interrogatory to the extent it seeks information regarding the calculation of damages Plaintiffs suffered as a result of the material misstatements and omissions alleged in the Complaint on the grounds that it is a premature contention-style interrogatory. Discovery is ongoing in this matter. Fact discovery does not close until September 21, 2020.

Scheduling and Case Management Order, Dkt. No. 197, at 2. The parties agreed that they would “not serve any contention-style interrogatories prior to 60 days before the end of fact discovery unless ordered by the Court.” Joint Report Pursuant to F.R.C.P. 26(f) and L.R. 16.2, Dkt. No. 183, at 15. This Interrogatory is premature and Plaintiffs do not presently intend to respond to this Interrogatory unless and until it is re-served at the appropriate time.

Subject to the foregoing and General Objections, Plaintiffs respond as follows: Plaintiffs stand on their objections. Nonetheless, Plaintiffs are willing to meet and confer regarding this Interrogatory.

INTERROGATORY NO. 9:

Identify all persons who have, claim to have, or whom you believe may have knowledge or information relating to any fact alleged in the Complaint or any fact underlying the subject matter of the Action.

RESPONSE:

Plaintiffs object to this Interrogatory to the extent it seeks information protected by the attorney-client privilege, the work-product doctrine, or any other legally recognized privilege, protection, immunity, or exemption from discovery. Plaintiffs further object to this Interrogatory because the phrase “all persons who have, claim to have, or whom you believe may have knowledge or information relating to any fact alleged in the Company or any fact underlying the subject matter of the Action” is overly broad, vague, ambiguous. Further, the Interrogatory is unduly burdensome and not proportionate to the needs of the case to the extent it requests Plaintiffs to identify “all persons who have, claim to have, or

whom [Plaintiffs] believe may have” such knowledge, as such persons would include, among others, millions of CenturyLink customers impacted by the Company’s fraudulent or otherwise improper sales and billing practices, current and former CenturyLink executives and employees who had knowledge of or engaged in these practices, and representatives or employees of the government and other regulatory agencies that have investigated or prosecuted (or are currently investigating or prosecuting) proceedings related to these practices as well as the persons involved in those investigations or proceedings (including all CenturyLink employees interviewed in connection with those investigations or proceedings).

Plaintiffs further object to this Interrogatory on the grounds that the parties still are in the early stages of discovery. Defendants only identified 26 individuals who likely had discoverable information on their initial disclosures (specifically, the Executive Defendants and the former employees cited in Plaintiffs’ Complaint), and 20 individuals in their initial ESI search proposal. Defendants did not begin producing documents identified through the application of Search Criteria until January 31, 2020, and Defendants recently informed Plaintiffs that they do not expect to substantially complete production of documents identified through the application of agreed-upon Search Criteria until two months after the substantial completion deadline of March 2, 2020. Moreover, Plaintiffs recently filed a motion to compel seeking an order requiring Defendants, among other things, to run the parties’ agreed-upon search terms on the documents Defendants produced to other state attorneys general and to conduct a search of CenturyLink’s “Integrity Line.”

Until Plaintiffs receive and have an opportunity to review all discovery to which they are entitled, they are unable to identify all persons who may have knowledge of relevant facts.

Subject to the General Objections, Plaintiffs refer Defendants to Plaintiffs' Initial Disclosures, CenturyLink's named Executive Officers and members of its Board of Directors during the Class Period, all individuals identified as custodians or potential custodians by the Parties in connection with the document discovery Defendants have or will produce in this Action, the third parties that have been (or may be) subpoenaed by Plaintiffs in this action (including their employees and agents), the individuals who were interviewed or included as custodians in connection with the Company's internal investigation described in CenturyLink's December 7, 2017 press release, CenturyLink current and former employees involved in any government investigation or proceeding relating to the billing and sales misconduct alleged in the Complaint, any family members of CenturyLink's current or former executive officers or directors who are or were employed by CenturyLink as described in CenturyLink's Proxy Statements that were filed with the SEC during the Class Period, and CenturyLink current and former employees who have knowledge of or involvement with the misstatements and omissions alleged in the Complaint. Plaintiffs further identify certain additional persons listed below who may have knowledge or information relating to any fact alleged in the Complaint or any fact underlying the subject matter of the Action. Plaintiffs reserve their right to supplement this Response with the names of additional persons Plaintiffs identify through discovery.

1. Margie Albritton
2. Rhonda Albritton

3. Brian Avila
4. O. Matthew Beal
5. Terry Beeler
6. Martha Bejar
7. Lacy Benedetto-Hahn
8. Lisa Benthin
9. Scott Besselievre
10. Dennis Boatwright
11. Sherry Bowen
12. Mary Brewer
13. Ryan Carter
14. William Cheek
15. Suzanne Clark
16. Jordan Dalton
17. Tony Davis
18. Nicholas DeNardo
19. Jeremy Ferkin
20. Dane Folster
21. Kim Frantz
22. Tracy Fuson
23. Geoff Gairett
24. Ross Garrity

25. Richard Gephardt
26. Wesley Gibson
27. Jeff Glover
28. Jared Guardipee
29. Thuy Ha
30. Eric Hamblin
31. Bruce Hanks
32. Melissa Harris
33. John Helbling
34. Jennie Hill
35. Lottie Hill
36. Julie Hiner-Gleason
37. David Hilton
38. Leann Holbrook
39. Dan Hubert
40. Aamir Hussain
41. Greg Jester
42. Aaron Jones
43. Marilyn Judish
44. Derek Koecher
45. Phil Kolterman
46. Kristin Konecny

47. Norman Korey
48. Jay Krachinsky
49. Stephanie Lake
50. Shirish Lal
51. Vicki Lambert
52. Mary Landrieu
53. Penny Larson
54. Ashley Lasuzzo
55. Dennis Long
56. Richard Lowery
57. Michael Lynch
58. Maria Marino
59. Rich Martinez
60. Kevin McCarter
61. Stacy McDaniel
62. Lynda McMahan
63. Andrew Mika
64. Patty Ann Miller
65. Jeff Mitchell
66. Mark Molzen
67. John Moore
68. Maxine Moreau

69. Jennifer Moses
70. Mark Myhre
71. Fred Nichols
72. Diana Ornelas
73. William A. Owens
74. Christopher Parker
75. Roger Peirce
76. H. Parnell Perry
77. Stephanie Polk
78. Matthew J. Post
79. Robert Reedy
80. Sue Riesing
81. Duane Ring
82. Jim Rose
83. Matt Rotter
84. Scott Russell
85. Judy Schultz
86. Meghan Sellar
87. James Stevenson II
88. Chris Sullivan
89. Cameron Tait
90. Lance Turner

- 91. Christi Uhrig
- 92. Jeffrey Von Deylen
- 93. Julie Von Ruden
- 94. Girish Varma
- 95. Michael Wagner
- 96. Kristina Waugh
- 97. Christine Wells
- 98. Channing Williams
- 99. Kenneth Wyatt

Dated: March 4, 2020

/s/ Michael D. Blatchley

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Oregon State Treasurer and the Oregon
Public Employee Retirement Board, on
behalf of the Oregon Public Employee
Retirement Fund and Plaintiff Fernando
Vildosola*

CERTIFICATE OF SERVICE

I, Michael D. Blatchley, hereby certify that on March 4, 2020, I caused to be served a true and correct copy of the foregoing *Plaintiffs' Responses and Objections to Defendants' First Set of Interrogatories* to be served on the following counsel of record via electronic mail:

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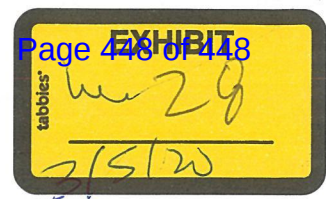
Dated: March 4, 2020

/s/ Michael D. Blatchley

Michael D. Blatchley
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Exhibit 4



MENU

[DOJ Home \(https://www.doj.state.or.us/\)](https://www.doj.state.or.us/) / [AG Rosenblum Announces \\$4 Million Settlement with CenturyLink \(/media\)](#)

AG Rosenblum Announces \$4 Million Settlement with CenturyLink

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Oregon Attorney General Ellen Rosenblum today announced a \$4 million settlement (https://www.doj.state.or.us/wp-content/uploads/2019/12/CenturyLink_-_AVC_19CV56401.pdf) with the global telecommunications company CenturyLink for engaging in deceptive advertising by door-to-door salespeople, deceptive billing practices, undisclosed fees, and failing to apply promised discounts to customer accounts. Since 2014, Oregon DOJ has received more than 1,200 consumer complaints about CenturyLink.

As part of the settlement, CenturyLink also will refund \$672,000 to 8,212 Oregonians who were overcharged for their services, or did not receive the promised discount. The impacted Oregon consumers will be contracted by CenturyLink directly, but any consumers with questions can contact the Oregon Attorney General's Consumer hotline at 877-877-9392.

"Purchasing internet, phone service and cable is confusing enough without false promises, and confusing prices and fees. Today's settlement sends a clear message that hidden fees and other forms of unfair and deceptive business practices will not be tolerated in Oregon," said Attorney General Rosenblum.

Specifically, Oregon consumers complained that CenturyLink charged more than the promised price, or they received multiple bills each month for different amounts, were billed for services after they had cancelled the service, or were billed for modems before they were installed. Consumers also complained about the quality of service, Internet speed that was much slower than what was promised, or Internet service so slow that it was unusable.

Under the settlement, which was filed in Multnomah County Circuit Court, CenturyLink must:

- Stop charging new customers the "Internet Cost Recovery Fee", a fee that was not always previously disclosed to consumers until they received their first bill.
- Stop charging a "Broadband Cost Recovery Fee".
- Allow current customers to have an opportunity to transition to another plan without the fee.
- Clearly disclose all mandatory fees and charges in future advertisements.
- Stop charging cancellation and unreturned equipment fees if they are not disclosed at the time of sale.

In February 2014, Oregon DOJ opened an investigation of CenturyLink in response to over 1,000 consumer complaints, including complaints about the company misrepresenting the price of services, failing to inform consumers of terms and conditions that could affect the price, and billing consumers for services they never received. In 2018, complaints about telecommunication services topped Oregon DOJ's top 10 consumer complaints.

Oregon DOJ will continue to lead a separate securities class action lawsuit arising from the same conduct.

Attorney General Rosenblum asks any Oregonian who believe they have received bills that include undisclosed fees [to file a consumer complaint \(https://www.doj.state.or.us/consumer-protection/sales-scams-fraud/report-scams-fraud/\)](https://www.doj.state.or.us/consumer-protection/sales-scams-fraud/report-scams-fraud/), or contact the Attorney General Consumer Hotline.

The Oregon Department of Justice (DOJ) is led by Attorney General Ellen Rosenblum, and serves as the state's law firm. The Oregon DOJ advocates for and protects all Oregonians, especially the most vulnerable, such as children and seniors.